



# SOUTHERN CALIFORNIA CHEMICAL

A DIVISION OF CP CHEMICALS, INC.

8851 DICE ROAD • SANTA FE SPRINGS, CALIFORNIA 90670-0118

September 27, 1989

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Dear Messrs. Yacoub and Hinton:

Enclosed is the April 1989 quarterly sampling report for Southern California Chemical, Santa Fe Springs facility. The report includes results of analyses of water samples and water level measurements obtained on April 25 - May 1, 1989, from the on-site monitoring wells.

We trust the information in the report meets your needs at this time. Should you have any questions, please contact us.

Very truly yours,

SOUTHERN CALIFORNIA CHEMICAL,  
A DIVISION OF CP CHEMICALS, INC.

*Milt Giorgetta*

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Enclosure

cc: see Following page

Messrs. Hank Yacoub and John Hinton  
Quarterly Sampling Report  
September 27, 1989

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**APRIL 1989  
QUARTERLY SAMPLING REPORT  
SOUTHERN CALIFORNIA CHEMICAL  
SANTA FE SPRINGS, CALIFORNIA**

09-26-89 4A

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*September 26, 1989*

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## Section 1

## 1.0 INTRODUCTION

This report summarizes the twelfth RCRA quarterly ground water monitoring sampling and analyses period at Southern California Chemical (SCC), Santa Fe Springs, California. Contained herein are the results of laboratory analyses of ground water samples and water level measurements obtained during the period April 25 to May 1, 1989.

The purpose of the quarterly ground water sampling program, which began in February 1985, is to monitor ground water quality and establish a database of the compounds in the ground water beneath the site. The primary goals of the program are (a) to assess the location and concentration of chromium and cadmium contamination, (b) to detect and evaluate water quality changes, and (c) to characterize background water quality.

In addition to the data obtained during the April 1989 sampling, this report contains plot plans showing contaminant distribution (Appendix A) and a summary of all previous sampling data (Appendix B). Copies of the original laboratory results are included in Appendices C, D, and E. Chain-of-custody records for the April 1989 sampling are included in Appendix F.

## Section 2

## 2.0 MONITOR WELL SAMPLING

Ground water sampling, utilizing existing on-site monitoring wells, was conducted by CDM field personnel during the period of April 25 to May 1, 1989. Field activities were performed in general accordance with the sampling protocol as outlined in the existing, unapproved, Southern California Chemical Quality Assurance Project Plan (Kleinfelder QAPP, May 1988).

Twelve monitor wells were sampled as part of this program (Figure A-1, Appendix A). Of these, 11 are screened in the upper portion of the Hollydale aquifer. The 12th well, MW-4a, is screened in the lower portion of the Hollydale aquifer. An additional monitoring well, MW-06a, historically has not been sampled for ground water analysis since it is a dry well. The well is screened in the lower portion of the uppermost aquifer, the Gage Aquifer, which is dry below the site.

As outlined in the Kleinfelder QAPP, certain analyses have been performed on a quarterly schedule, while others have recently been done on a biannual schedule, coinciding with quarterly sampling (effective September 1988). Ground water sampling, utilizing monitoring wells MW-1 through MW-6, was initiated at the site by J. H. Kleinfelder and Associates (Kleinfelder) at the end of February, 1985. Quarterly sampling was initiated one year later on March 1986. Subsequent to the March 1986 sampling event, seven additional wells were installed at the site, thereby increasing the total number of active wells to 12. Commencing with the January 1989 sampling event, Camp Dresser & McKee Inc. (CDM) has been responsible for all ground water monitoring activities at the facility. A detailed listing of analytical parameters per sampling event has been provided in Table 2-1.

As in the past, the Regional Water Quality Control Board (RWQCB), and California Department of Health Services (DHS) were notified prior to commencement of sampling activities and were provided the opportunity to observe sampling and to collect duplicate and/or split samples. No representatives from either agency were present at any time during sampling. In addition to these agencies, EPA was also notified of the

TABLE 2-1

## SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
3/85	X (includes Cd & total Cr)	X	QUAD	Cu&ZN*	X*	X	X*	—	Sampled wells MW1,2,3,4, 5,&6. Sulfide, nickel and * requested by DOHS and RWQCB
3/86	X	X	QUAD	Cu&Zn	X	X	X	—	Sampled wells MW1,2,3,4, 5 & 6.
7/86	—	—	QUAD	X	X	X	X	624	Sampled 12 wells (MW1,2, 3,4,4a,5,6b,7,8,9,10 and 11)
9/86	—	—	QUAD	X	X	X	X	624	Sampled all 12 wells (as previous)
12/86	—	—	QUAD	X	X	X	X	624	" " " " "
3/87	—	—	QUAD	X	X	X	X	601/602	Sampled 11 wells, <u>not</u> 4a
7/87	—	—	QUAD	X	X	X	X	601/602	After July 1987, all 12 wells were sampled during each event.
10/87	—	—	QUAD	X	X	X	X	601/602	
2/88	—	—	QUAD	X	X	X	X	601/602	
6/88	—	—	X (not QUAD)	X	X	X	X	601/602	Performed statistical analysis (t-test) on Indicator Parameters (IPs).
9/88	—	—	—	X	X	X	X	601/602	IPs & volatile organics from MW1, 2,4a, 5, 6, 7 measured semi-annually in June/Dec.

TABLE 2-1

## SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
1/89	—	—	QUAD	X	X	X	X	601/602	
4/89	—	—	—	X	X	X	X	601/602	Volatile organics measured for all 12 wells.

Appendix III Parameters - As, Ba, Cd, Cr, F, Pb, Hg, N, Se, Ag, Endin, Lindane, Methoxychlor, Toxaphene, 2,4,D, 2,4,5TP (Silvex),  
Radium, Gross Alpha & Beta, turbidity, coliform bacteria

Water Quality Parameters. - Cl, Fe, Mn, Phenols, Na, SO<sub>4</sub>

Indicator Parameters - TOX, TOC, pH, EC

624 = Volatile organics analysis

601/602 - Purgeable halocarbons/aromatics analysis

sampling program. Similarly, no representatives from that agency were present at anytime during sampling.

## 2.1 Sampling Procedure

To ensure continuity with previous quarterly samplings, field sampling and decontamination procedures were carried out as outlined in the Kleinfelder QAPP with some minor notification. Sampling practices included efforts to detect floating product and hydrocarbon vapors at each well, measurement of the static water level and total depth of each well for calculating pre-sampling evacuation volumes, purging and sampling of ground water for laboratory analysis, decontamination of sampling equipment, and correct handling of sample containers. Deviations from the QAPP generally are limited to implementation and decontamination of the submersible sampling pump systems. This was necessitated by a change in design of the pump system used for this sampling period versus prior sampling periods. Details of these deviations are discussed in Sections 2.1.3 and 2.2.

### 2.1.1 Detection of Organic Vapors and Immiscible Layers

Due to the known presence of organic compounds in the ground water in the Hollydale aquifer, efforts were made to determine if organic well vapors and immiscible floating product layers could be detected in the field. Prior to opening a monitor well for sampling, the air immediately above the well was monitored for organic vapors through the use of a photoionization detector (PID) equipped with a 10.0 eV lamp. The head space of each well was checked for volatile organic vapors by inserting the intake tube of the PID into the well head immediately after removing the monitoring well security plate and opening the casing cap. The maximum and average reading values for each well were recorded in the field log book.

The depth to static water level was measured to the nearest 0.01 foot using a decontaminated electric water level sounder. These data were subsequently input in calculations for determining wetted casing volumes and for use in determining ground water elevations at the facility.

A decontaminated, 2-inch diameter, clear teflon bailer, equipped with a bottom ball-check valve, was lowered and immersed into the ground water approximately half its length and brought up to the surface. Although none were observed, field personnel were prepared to record the thickness of floating product or note any iridescence on the water surface.

### 2.1.2 Purge Volume Determination

The total depth of each monitoring well was measured by lowering the water level sounder line until the sounder weights could be felt contacting the well bottom. This value was compared with the total depth of the well casing, as it had been constructed, to determine the amount of sediment fill present in each well. One wetted casing volume was then calculated by using the following formula:

$$1v = L \times \pi \times r^2$$

where:  $1v$  = one wetted casing volume  
L = length of wetted casing  
 $\pi$  = 3.142  
r = inside radius of the casing

### 2.1.3 Ground Water Purging and Sampling

A decontaminated 40-inch bladder pump consisting of a teflon bladder fitted inside a stainless steel pump body was lowered to the approximate middle of the wetted, open screened casing of each well, where feasible. The air supply and sample discharge lines were constructed of teflon as well. Prior designs of the bladder pump included separate teflon-coated air supply and sample discharge lines. A design change involved the use of coaxial tubing wherein the sample discharge line was encased within the air supply line. To ensure quality control on decontamination of the assembly, the inner surface of the sample discharge line and the outer surface of the air supply line were teflon coated. This ensured that all surfaces coming into contact with ground water would be teflon coated. In addition, the longer 4-inch diameter wells were evacuated more effectively and efficiently by using the bladder pump's ability to be extended from a 40-inch to a 72-inch assembly and used as an air lift pump. A reduction to the

40-inch bladder assembly and final well evacuation was done prior to extracting samples for laboratory analysis.

Field water quality parameters (pH, EC, temperature, and visual characteristics) were monitored and recorded at appropriate intervals during the purging of ground water from each well. Prior to evacuating the ground water, the pH and EC meters were calibrated with appropriate calibration solutions. Ground water was purged until the parameters had stabilized and approximately three to five well casing volumes were evacuated. All purge water collected from each well was contained and labeled in SCC-supplied 55-gallon barrels for treatment and disposal by SCC at the on-site wastewater treatment facilities.

Ground water samples were discharged directly into previously labeled sample bottles which were then placed inside plastic zip-lock baggies and placed in an ice-cooled chest. Samples for metals analyses were field filtered with a sterile, 0.45-micron, in-line filter as the appropriate bottles were filled. Precautions were taken to ensure that no headspace or bubbles were present in sample vials for volatile organic compound analysis.

Ground water samples were collected in the following sequence as determined in the Kleinfelder QAPP:

- o EPA Method 601/602
- o Metals (Cd, Cu, Zn, Cr)
- o Hexavalent Chromium
- o Chloride/Nitrate

Ground water sample bottles were numbered using the following format:

(e.g.) SCC-MW01-0.0-002

Where:

- SCC - designates site acronym
- MW01 - designates sample location number (MW = Monitoring Well)
- EB - designates equip. blank
- SC - designates steam cleaner
- PP - designates spiked samples
- BG - designates travel blanks

- DIW - designates de-ionized water
- 0.0 - designates depth sample taken (primarily for soil samples; water = 0.0)
- 002 - designates sequential sample number (per sampling event)

Since this was the second round of sampling conducted by CDM, a 002 sequence number was assigned to all ground water samples collected. Sample label information included date and time of sampling, CDM sample number, and analytical parameters.

#### 2.1.4 Sample Handling

All sample containers that were collected from each well were accompanied by chain-of-custody forms that indicated the label information as well as the responsible person during each step of the transportation process. All samples were hand-delivered to the appropriate laboratories on the day that they were collected, and a copy of the chain-of-custody for that day was retained by CDM field personnel. The laboratories were notified at the time of delivery that one or more Cr(VI) sample(s) were contained in the shipment to ensure that the samples would be analyzed within the prescribed 24-hour holding period.

### 2.2 Equipment Decontamination Procedures

The following sections describe the procedures utilized to decontaminate ground water sampling equipment.

#### 2.2.1 Sampling Pump/Lines Decontamination

The bladder pump assembly and coaxial tubing were decontaminated to reduce the possibility of cross-contamination between monitoring wells. The first step in the decontamination procedure was to connect the steam cleaner directly to the pump assembly via a quick coupler, and steam clean the pump and discharge line. The sample pump was then disconnected from the coaxial tubing and disassembled into its components. The components were scrubbed with a phosphate-free detergent solution and rinsed with fresh tap water. They were then sprayed with methanol and double-rinsed with deionized water.

(DIW). The exterior of the coaxial tubing was scrubbed with a phosphate-free detergent solution and steam cleaned. The pump assembly was then reassembled and reattached to the coaxial tubing.

The final decontamination step was accomplished by submerging the pump into a decontaminated 55-gallon barrel containing DIW and pumping approximately 5 gallons of DIW through the system. An additional five gallons of DIW were pumped to allow the collection of an equipment blank after every sixth well sampling. A sample of the DIW in the 55-gallon drum was taken to perform confirmation analyses for comparison in the event of anomalous laboratory results.

The decontamination of the exterior pump line was performed over a plastic waterproof tarp. The tarp was placed on a gently sloping surface and bermed up at the lower edges, allowing the decontamination water to flow away from the equipment being cleaned. The spent water was recovered and stored in 55-gallon drums for treatment by SCC in the facility's wastewater treatment system.

#### 2.2.2 Accessory Sampling Equipment Decontamination

Accessory sampling equipment such as the teflon bailer and the water level sounder were decontaminated to prevent cross-contamination between the monitoring wells. With the exception of steam-cleaning, the bailer was disassembled and decontaminated exactly as the bladder pump assembly components. The teflon bailer was not steam-cleaned because initial attempts showed that the high temperatures would have melted the bailer.

The water level sounder was decontaminated between wells by scrubbing with a phosphate-free detergent solution followed by steam-cleaning.

## **Section 3**

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### 3.0 LABORATORY TESTING

Three laboratories were utilized as a quality control measure intended to ensure the accuracy of the laboratory analyses performed on the ground water samples. Analytical testing was provided by ENSECO Laboratories (ENSECO), Garden Grove, California, and duplicate sample testing was provided by CKY Laboratories (CKY), Torrance, California. West Coast Analytical Services (WCAS) of Santa Fe Springs, California prepared spike samples that were submitted to the above laboratories for assessment of analytical consistency. Spike sample preparation and analysis is discussed in Section 4.2.

During the April quarterly sampling event, a total of 27 water samples were submitted for laboratory analysis. Fifteen samples consisting of 12 monitor well (MW) samples, two equipment blanks (EB), and one steam cleaner sample (SC) were collected and submitted to ENSECO for analysis of purgeable halocarbons/aromatics (601/602), cadmium, total and hexavalent chromium, copper, zinc, chloride and nitrate. In addition, four duplicate monitor well samples (MW-3, MW-4, MW-7 and MW-11) were submitted to CKY for analysis of the above parameters. Five travel blanks (BG) and one deionized water sample (DIW) were also submitted for analysis of purgeable halocarbons/aromatics only. WCAS prepared a spiked sample (PP) for analysis by both laboratories. With the exception of chloride and nitrate, the spiked sample was analyzed for the parameters described above. In accordance with the procedures established in the Kleinfelder QAPP, samples were not collected nor submitted for analysis of the four RCRA Indicator Parameters (total organic carbon, total organic halogens, pH and specific conductivity).

The April 1989 ground water analytical results are discussed in Section 6.0 and summarized in Tables 6-1 through 6-3. The results of duplicate and spiked sample analyses are discussed in Section 4.0 and summarized in Tables 4-1 through 4-3. Historical ground water analyses data are summarized in Tables 1 through 12 of Appendix B. Individual analytical reports for April 1989 are located in Appendices C, D and E. Chain-of-custody records are located in Appendix F.

**Section 4**

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#### 4.0 QUALITY ASSURANCE

To verify the accuracy and validity of analytical data resulting from laboratory testing, certain quality assurance procedures were implemented, in accordance with the Kleinfelder QAPP. These procedures included the use of duplicate samples, spiked samples, equipment blanks, travel blanks, and the use of chain-of-custody forms.

##### 4.1 Duplicate Sampling

Duplicate ground water samples from four of the twelve monitoring wells were submitted to CKY for analysis. During the January 1989 quarterly sampling, Wells MW-02, MW-03, MW-04 and MW-11 were selected for duplicate analyses due to a historical presence of volatile organic compounds in the three wells (MW-02, MW-03 and MW-11) located along the facility's northern border, and high levels of chromium in well MW-04. During the April 1989 sampling event, wells MW-03, MW-04, MW-07 and MW-11 were selected for duplicate analyses. Well MW-07 was substituted for MW-02 in order to confirm the presence of low levels of toluene, ethylbenzene and total xylene compounds detected in the well at concentrations of 1.4, 1.2 and 3.6  $\mu\text{g/l}$ , respectively, during the January sampling event.

The results of the duplicate analyses have been tabulated on Tables 4-1 through 4-3. As can be seen by an examination of Table 4-2, benzene, toluene, ethylbenzene and xylene (BTEX) compounds above method detection limits were not detected in either sample submitted from Well MW-07. Elevated levels of BTEX compounds were, however, detected in both samples from wells MW-03, MW-04 and MW-11.

The purgeable halocarbon/aromatics duplicate analytical results, as shown in Tables 4-1 through 4-2, show that both ENSECO and CKY were in general agreement. High levels of BTEX compounds (purgeable aromatics) present in samples from wells MW-03 and MW-11 required ENSECO to dilute the two samples, resulting in an increase of their method detection limits to 50 and 500  $\mu\text{g/l}$ , respectively, on their purgeable halocarbons/aromatics

**TABLE 4-1**  
**SOUTHERN CALIFORNIA CHEMICAL**  
**APRIL 1989 QUARTERLY SAMPLING**  
**PURGEABLE HALOCARBONS ANALYTICAL RESULTS**  
**DUPLICATE SAMPLES**

COMPOUND	MW03		MW04		MW07		MW11	
	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY
Chloromethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Bromomethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Vinyl Chloride	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Chloroethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Methylene Chloride	< 50.00	< 5.00	94.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Trichlorofluoromethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,1-Dichloroethene	< 50.00	23.00	55.00	54.00	< 1.00	15.00	< 500.00	20.00
1,1-Dichloroethane	< 50.00	11.00	92.00	74.00	4.00	6.30	< 500.00	8.80
trans-1,2-Dichloroethene	< 50.00	< 5.00	< 5.00	< 5.00	2.00	< 5.00	< 500.00	< 5.00
Chloroform	< 50.00	35.00	12.00	25.00	< 1.00	13.00	< 500.00	15.00
1,2-Dichloroethane	< 50.00	36.00	< 5.00	58.00	< 1.00	< 5.00	< 500.00	12.00
1,1,1-Trichloroethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Carbon Tetrachloride	< 50.00	47.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Bromodichloromethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,2-Dichloropropane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
cis-1,3-Dichloropropene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Trichloroethene	120.00	110.00	280.00	210.00	47.00	41.00	< 500.00	39.00
Dibromochloromethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,1,2-Trichloroethane	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
trans-1,3-Dichloropropene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
2-Chloroethylvinyl ether	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Bromoform	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
Tetrachloroethene	< 50.00	< 5.00	< 5.00	< 5.00	2.00	< 5.00	< 500.00	< 5.00
1,1,2,2-Tetrachloroethane	< 50.00	< 5.00	< 5.00	< 5.00	NR	< 5.00	< 500.00	< 5.00
Chlorobenzene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,3-Dichlorobenzene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,2-Dichlorobenzene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00
1,4-Dichlorobenzene	< 50.00	< 5.00	< 5.00	< 5.00	< 1.00	< 5.00	< 500.00	< 5.00

< Denotes non-detection at indicated detection limit

= Compound concentration is equal to detection limit

Note: All results in micrograms per liter (ug/l)

NR Denotes not reported, compound coelutes with Tetrachloroethene and is combined with that result.

**TABLE 4-2**  
**SOUTHERN CALIFORNIA CHEMICAL**  
**APRIL 1989 QUARTERLY SAMPLING**  
**PURGEABLE AROMATICS ANALYTICAL RESULTS**  
**DUPLICATE SAMPLES**

COMPOUND	MW03		MW04		MW07		MW11	
	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY
Benzene	< 50.00	< 5.00	< 5.00	< 5.00	< 0.70	< 5.00	< 500.00	< 5.00
Toluene	< 50.00	< 5.00	23.00	14.00	< 1.00	< 5.00	7500.00	1400.00
Ethylbenzene	1200.00	670.00	15.00	9.00	< 1.00	< 5.00	2600.00	660.00
Xylenes, Total	60.00	71.00	50.00	43.00	= 1.00	< 5.00	11000.00	740.00
< Denotes non-detection at indicated detection limit					Note: All results in micrograms per liter (ug/l)			
= Compound concentration is equal to detection limit								

COMPOUND	MW03		MW04		MW07		MW11	
	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY	ENSECO	CKY
Cadmium	< 0.01	< 0.01	0.05	0.08	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, total	0.07	< 0.01	100.00	92.00	= 0.02	< 0.01	0.04	< 0.01
Copper	< 0.02	< 0.05	= 0.02	< 0.05	< 0.02	< 0.05	< 0.02	< 0.05
Zinc	< 0.02	< 0.05	< 0.02	< 0.05	< 0.02	< 0.05	< 0.02	< 0.05
Chromium, hexavalent	< 0.05	0.0035	43.00	90.00	< 0.05	0.0016	< 0.05	0.0016
Chloride	420.00	438.00	990.00	932.00	180.00	177.00	120.00	179.00
Nitrate (Nitrogen)	3.10	3.80	0.90	1.00	3.40	4.80	1.70	29.00

< Denotes non-detection at indicated detection limit  
= Compound concentration is equal to detection limit

Note: All results in milligrams per liter (mg/l)

Note: All results in milligrams per liter (mg/l)

analyses. Sample dilution is a standard technique employed by analytical laboratories when high levels of contaminants are present. Fortunately, CKY was able to exercise better control of their dilution factor, resulting in only a slight increase of their method detection limit from 1  $\mu\text{g/l}$  to 5  $\mu\text{g/l}$ . Because of the higher detection limits used by ENSECO, numerous purgeable halocarbons detected by CKY in the two samples at concentrations less than 50  $\mu\text{g/l}$  were not detected by ENSECO.

The purgeable aromatic analytical results from both sets of samples were also in general agreement, with the exception of the results from well MW-11. CKY generally reported both purgeable halocarbon and aromatic compounds at slightly lower concentrations than ENSECO. The majority of the differences, therefore, are not considered significant. As can be seen by an examination of Table 4-2, in the case of the sample collected from well MW-11, the concentrations reported by ENSECO range from four (2600 versus 660  $\mu\text{g/l}$  ethylbenzene) to 15 (11,000 versus 740  $\mu\text{g/l}$ ) times greater than the concentrations reported by CKY. This discrepancy in results is well outside the range which is considered normal and signifies a possible analytical problem at one or both of the labs. Both CKY and ENSECO were contacted in an effort to determine the cause for the discrepancy. At this point, it should be noted that the ENSECO value for well MW-11 of <500  $\mu\text{g/l}$  benzene is a revised number. Originally, ENSECO reported a value of 800  $\mu\text{g/l}$  benzene for well MW-11 versus a CKY value of not-detected at concentrations greater than 5  $\mu\text{g/l}$ . CKY QA/QC staff verified that there were no unusual circumstances with the analysis; their equipment was functioning properly and there were no apparent interference problems. ENSECO QA/QC staff also confirmed that their equipment was functioning properly. They did verify, however, that the original analytical report was in error to have reported benzene present in the sample at a concentration of 800  $\mu\text{g/l}$ . They subsequently amended the analytical report to reflect this change to show that benzene was not detected at a method detection limit of 500  $\mu\text{g/l}$ . The benzene result as reported by CKY was determined to be the correct value.

It could not be determined with any certainty, which of the remaining purgeable aromatic analytical results from well MW-11 were more accurate and representative of ground water conditions at that location. As

described more fully in Section 4.2, blind spiked samples were submitted to both laboratories for purgeable halocarbons/aromatics and metals analyses. The BTEX results from both labs compared to the prepared spike analysis were acceptable. ENSECO values ranged from 43 to 100 percent recovered, with CKY values ranging from 69 to 143 percent recovered. During evacuation procedures at well MW-11, it was noted that the discharge water was light black in color, with an unknown black material observed suspended in the water. It is not known if this material could have caused the discrepancy in the analytical results. No obvious hydrocarbon odor was noted, nor was an immiscible layer present when the air/water interface (ground water surface) was checked for floating product. Historically, relatively high levels ( $>1000\mu\text{g/l}$ ) of BTEX compounds were last detected in well MW-11 in 1986 (May, July, September, and December). Since that time, BTEX compounds have continued to be detected at MW-11, though at much lower concentrations (refer to Appendix B, Table 12). Therefore, with the exception of the benzene value which has been corrected, it cannot be determined from the available information which set of BTEX data from well MW-11 is more accurate. The rather large benzene error originally reported by ENSECO tends to place more confidence in the BTEX results reported by CKY, however, since this cannot be verified, both primary lab and duplicate BTEX values for MW-11 are shown on Figures A-7 through A-9 in Appendix A.

The duplicate metals, chloride and nitrate, analyses from both labs are also in general agreement. A minor exception was the result for hexavalent chromium which was found in well MW-04 at a concentration of 43 and 90 mg/l by ENSECO and CKY, respectively. While CKY detected more than two times as much hexavalent chromium as ENSECO, this is not considered to be significant because the level of hexavalent chromium in both cases exceeds the federal maximum concentration level for chromium (MCL of 0.05 mg/l).

#### 4.2 Spiked Sample Testing

Three sets of spiked samples were prepared by WCAS for analysis of purgeable halocarbons/aromatics, cadmium, chromium (total and hexavalent) copper and zinc. One set of spiked samples were submitted both to ENSECO and CKY as a QA/QC check. WCAS also analyzed a set in order to verify the spiked concentrations of their prepared samples. The results have been tabulated in Tables 4-4 through 4-6.

TABLE 4-4  
SOUTHERN CALIFORNIA CHEMICAL  
APRIL 1989 QUARTERLY SAMPLING  
PURGEABLE HALOCARBONS ANALYTICAL RESULTS  
MISCELLANEOUS QA/QC SAMPLES

COMPOUND	BG07	BG08	BG09	BG10	BG11	DIW2	EB04	EB05	WCAS	PP02	PP03	SC02
Chloromethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00	< 10.00	< 1.00
Bromomethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00	< 10.00	< 1.00
Vinyl Chloride	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.60	< 5.00	< 10.00	< 1.00
Chloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00	< 10.00	< 1.00
Methylene Chloride	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	53.00	< 5.00	80.00	< 1.00
Trichlorofluoromethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.40	< 5.00	< 10.00	< 1.00
1,1-Dichloroethene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.60	13.00	< 10.00	< 1.00
1,1-Dichloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.40	< 5.00	< 10.00	< 1.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Chloroform	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	13.00	< 10.00	< 1.00
1,2-Dichloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.40	< 5.00	< 10.00	< 1.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Carbon Tetrachloride	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Bromodichloromethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
1,2-Dichloropropane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Trichloroethene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Dibromochloromethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.80	< 5.00	< 10.00	< 1.00
Bromoform	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.50	< 5.00	< 10.00	7.00
Tetrachloroethene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.30	< 5.00	< 10.00	< 1.00
Chlorobenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00	< 10.00	< 1.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.20	< 5.00	< 10.00	< 1.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.20	< 5.00	< 10.00	< 1.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 0.20	< 5.00	< 10.00	< 1.00

< Denotes non-detection at indicated detection limit  
= Compound concentration is equal to detection limit

BG= Travel Blank  
SC= Sample obtained from steam cleaner  
DIW= De-ionized water  
EB= Equipment Blank  
PP= Spike  
WCAS = West Coast Analytical Services, spiked sample

Note: All results in micrograms per liter (µg/l)  
Laboratory analysis performed by ENSECO with  
exception of PP02 which was analyzed by CKY

**TABLE 4-5**  
**SOUTHERN CALIFORNIA CHEMICAL**  
**APRIL 1989 QUARTERLY SAMPLING**  
**PURGEABLE AROMATICS ANALYTICAL RESULTS**  
**MISCELLANEOUS QA/QC SAMPLES**

COMPOUND	BG07	BG08	BG09	BG10	BG11	DIW2	EB04	EB05	WCAS	PP02	PP03	SC02
Benzene	< 0.70	< 1.00	< 1.00	< 0.70	< 0.70	< 0.70	< 1.00	< 0.70	120.00	83.00	52.00	< 1.00
Toluene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	140.00	140.00	95.00	< 1.00
Ethylbenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	70.00	100.00	46.00	< 1.00
Xylenes, Total	= 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	190.00	220.00	190.00	< 1.00

< Denotes non-detection at indicated detection limit  
= Compound concentration is equal to detection limit

BG= Trip Blank  
SC= Sample obtained from steam cleaner  
DIW= De-ionized water  
EB= Equipment Blank  
PP= Spike  
WCAS= West Coast Analytical Services spiked sample

Note: All results in micrograms per liter (ug/l)  
Laboratory Analysis performed by ENSECO with exception  
of PP02 which was performed by CKY

COMPOUND	EB04	EB05	WCAS	PP02	PP03	SC02
Cadmium	< 0.01	< 0.01	0.44	0.43	0.37	< 0.01
Chromium, total	< 0.02	< 0.02	5.00	4.90	4.30	0.03
Copper	< 0.02	< 0.02	1.60	1.50	1.30	0.05
Zinc	< 0.02	< 0.02	3.50	3.50	2.70	0.21
Chromium, hexavalent	< 0.05	< 0.05	9.65	0.18	2.30	< 0.05
Chloride	7.40	5.40	NA	NA	< 0.10	86.00
Nitrate (Nitrogen)	< 0.20	< 0.20	NA	NA	< 0.20	1.2
< Denotes non-detection at indicated detection limit						
Note: All results in milligrams per liter (mg/l)				SC= Sample obtained from steam cleaner		
Laboratory analysis performed by ENSECO with				DIW= De-ionized water		
exception of PP02 which was analyzed by CKY				EB= Equipment Blank		
				PP= Spike		
				WCAS= West Coast Analytical		
				Services spiked sample		

As can be seen by an examination of Table 4-4, a fairly significant amount (>50  $\mu\text{g/l}$ ) of methylene chloride (a common laboratory contaminant) was detected by both WCAS and ENSECO. The samples were not spiked with any purgeable halocarbons compounds, therefore, the methylene chloride resulted from laboratory cross-contamination.

As was previously discussed in Section 4.1, percent recoveries for BTEX compounds ranged from 43 to 100 percent for ENSECO, and from 69 to 143 percent for CKY, indicating, in our professional opinion, an acceptable degree of accuracy. With the exception of the hexavalent chromium results, percent recoveries for metals were better, ranging from 94 to 100 percent for CKY, and 77 to 86 percent for ENSECO. The spiked samples for hexavalent chromium analysis were not delivered to the laboratories within the recommended time period, therefore, their maximum recommended holding time (24 hours prior to analysis) was exceeded. The laboratories were contacted regarding the sample holding time and their QA/QC staff indicated that the results would not be significantly affected because the samples had been adequately preserved. This was apparently not the case since percent recoveries ranged from 2 percent at CKY to 24 percent at ENSECO.

#### 4.3 Equipment Blank Testing

Two equipment blanks were collected in order to verify that cross-contamination between wells did not occur during sampling. Samples of distilled water were collected from the decontaminated sample pump/lines prior to sampling the first well and after the sixth well. In addition, water was sampled from both the steam cleaner and the 55-gallon barrel used to contain the deionized water (DIW) used in the decontamination procedures. The water sample collected from the steam cleaner was obtained from the end of the discharge nozzle and analyzed for purgeable halogenated and aromatic volatile organic compounds. Results of equipment blank analyses are shown in Tables 4-4 through 4-6.

As can be seen by an examination of the three tables, neither the five selected metals nor purgeable halocarbon/aromatic compounds were detected in the equipment blank samples. Low levels of chlorides were detected at

concentrations of 5.4 and 7.4 mg/l in samples EB05 and EB04, respectively. This is not, however, believed to be indicative of a cross-contamination problem. Dependent upon the source of the supplier's make-up water, low to moderate levels of chlorides (10s to 100s mg/l) are typically present in commercially available DIW. The deionization process does not effectively remove chlorides and residual levels often remain.

#### 4.4 Travel Blank Testing

The detection of compounds in travel blanks is generally indicative of systematic contamination from sample transport, laboratory glassware cleaning, laboratory storage, or analytical procedures. For each day of sampling, one laboratory prepared travel blank consisting of organic-free water was labeled and submitted for purgeable halocarbon and aromatic volatile organic analysis by EPA Methods 601/602. Tables 4-4 and 4-5 show the results of travel blank analyses. Each travel blank was stored with the days' samples to be analyzed for volatile organic compounds. An examination of the tables reveals that, with the exception of the detection of 1  $\mu$ g/l total xylenes in sample BG07, no purgeable halocarbon/aromatic compounds were detected in any of the five travel blanks. The trace amount of xylene detected at the method detection limit is not indicative of a cross-contamination problem.

#### 4.5 Steam Cleaner Sample

One steam cleaner sample was collected in order to check for cross-contamination resulting from use of the steam cleaner. As was the case during the previous round of sampling, a minor amount of bromoform (7  $\mu$ g/l) was detected in the sample. Since bromoform was not detected in any of the well or quality control samples, it is not indicative of a cross-contamination problem. The other constituents which were detected (total chromium, copper, zinc, chloride and nitrates) probably reflect the quality of the drinking water provided to the Santa Fe Springs area since tap water was the source of supply for the steam cleaner.

#### 4.6 Sample Control

All samples were labeled immediately prior to sampling with a waterproof pen. Samples were transported under chain-of-custody and hand delivered by CDM personnel to the laboratories in ice-cooled chests. Copies of the chain-of-custody records are included in Appendix F.

**Section 5**

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## 5.0 GROUND WATER ELEVATION

Prior to the initiation of well evacuation procedures, the depth to ground water was measured in each monitoring well. Ground water elevations were calculated by subtracting the depth to static water level from the surveyed elevation of the corresponding monitor well. The elevation of the ground water surface had increased at each well since the previous January 1989 Quarterly Sampling. This increase ranged between 3.15 and 4.27 feet, with an average increase of 3.9 feet. During the previous round of sampling an approximate one to three foot decline in ground water elevation was noted. As has been observed during prior sampling events, no water was detected in monitoring well MW-06a which is screened in the Gage formation.

Table 5-1 lists the depths to water and ground water elevations for each well. Figure A-2 shows the approximate ground water surface elevation of the Hollydale Aquifer. An examination of the ground water elevation at each well location illustrates that, with the exception of well MW-4a, all data points fall within the appropriate ground water elevation contours as drawn. In several instances, the data points do not "fit" within the contour lines as well as would be expected. For example, the value for well MW-02, when compared to the values for wells MW-11 and MW-01, appears to be several tenths of a foot lower than its position relative to the two would indicate. As stated in the previous quarterly sampling report (CDM, July 1989), this apparent discrepancy could potentially be attributable to user error in measuring the water depths in wells or to an erroneous data base of casing elevations. At this point, expectations are that all wells will be resurveyed when new wells are installed during the forthcoming RCRA facility investigation. In spite of potential error, the contours still indicate a southwest regional ground water gradient.

Of the 12 ground water monitoring wells completed in the Hollydale Aquifer, 10 are perforated in the approximate interval from 45 to 75 feet below ground surface. The exceptions are wells MW-01 and MW-04a which are perforated in the intervals from 42 to 62 feet and 87 to 107 feet, respectively. During the previous round of sampling, the ground water elevation at well MW-04 (shallow) was a minimal 0.09 feet higher than the

TABLE 5-1

GROUND WATER ELEVATION DATA  
APRIL 1989 QUARTERLY SAMPLING  
SOUTHERN CALIFORNIA CHEMICAL

Well No.	Well Headspace* (ppm)	Total Depth Constructed (ft)	Total Depth Measured (ft)	Casing Fill (ft)	M.P. Elevation (ft)	Depth to Water (ft)	G.W. Elevation (ft)
1	NR	62.5	NR	NR	152.60	52.15	100.45
2	3	74.0	69.4	4.6	151.56	52.20	99.36
3	5	75.0	68.8	6.2	151.62	52.33	99.29
4	0.7	75.0	66.9	8.1	149.76	50.57	99.19
4a	NR	107.0	107.7	0	152.49	54.21	98.28
5	0	75.0	73.9	1.1	153.21	54.90	98.31
6a	NR	30.0	28.6	1.4	149.31	dry	dry
6b	NR	77.0	74.2	2.8	149.46	50.35	99.11
7	NR	75.0	74.8	0.2	149.27	50.44	98.83
8	23	71.0	69.9	1.1	149.53	50.47	99.06
9	56	77.0	78.5	0	151.14	51.47	99.67
10	NR	75.0	NR	NR	151.60	52.06	99.54
11	63	75.5	73.0	2.5	152.80	52.95	99.85

NR = No Reading

M.P. = Measuring Point (well head)

G.W. = Groundwater

\* = Measured with PID prior to sampling

ground water elevation at well MW-04a (deep). In April 1989, ground water elevation at the shallow well was 0.91 feet higher than the deep well. It is not known at the present time whether the increase is due to differences in well construction, measurement error or other unknown factors. Subsequent measurements at the location will allow for a determination of whether the observed difference is reflective of actual conditions or other factors.

**Section 6**

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## 6.0 GROUND WATER QUALITY

Based upon the results of laboratory testing performed on the ground water samples collected January 1989 from the on-site monitor wells, the presence of two contaminant plumes in the Hollydale Aquifer was reaffirmed. Historically, these plumes have been present at varying concentrations and lateral extent. In January 1989, one plume consisting primarily of site-specific indicator parameters (metals), was aligned in a northeasterly direction in the vicinity of wells MW-04 and MW-09. The other, consisting of organic compounds, was similarly aligned along the northern boundary of the site property with the highest concentrations found in wells MW-03, MW-04, and MW-11.

Analytical results from the 12 wells sampled during the April 1989 quarterly monitoring have been compiled in Tables 6-1 through 6-3. As can be seen from an examination of the analytical data, significant amounts of total and hexavalent chromium and to a much lesser extent zinc were detected at well MW-04 (shallow). In addition, significant concentrations of purgeable aromatic compounds were detected at wells MW-03, and MW-11. The following sections will describe both metals and purgeable halocarbon/aromatics analytical results in detail.

### 6.1 Site-Specific Indicator Parameters

#### Hexavalent Chromium (Cr(VI))

Elevated levels of Cr(VI) were found to be present in MW-04 and MW-09 during the January 1989 sampling. Cr(VI) was originally detected in MW-04 at a concentration of 500 mg/l in June, 1985, and has fluctuated between 33 (January 1989 data) and 500 mg/l since. The concentration of Cr(VI) in MW-04 had significantly decreased since the September 1988 sampling when it was detected at 170 mg/l. At the present time, its concentration has remained fairly stable (43 mg/l). In September 1986, Cr(VI) in MW-09 was detected at a concentration of 0.05 mg/l, with fluctuations between non-detected and 1.50 mg/l since. The concentration of Cr(VI) has decreased in MW-09 since the September 1988 sampling. During the most recent sampling, it was not detected at a method detection limit of

**TABLE 6-1**  
**SOUTHERN CALIFORNIA CHEMICAL**  
**APRIL 1989 QUARTERLY SAMPLING**  
**PURGEABLE HALOCARBONS ANALYTICAL RESULTS**

COMPOUND	MW01	MW02	MW03*	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11*
Chloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromomethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Vinyl Chloride	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Methylene Chloride	< 1.00	< 1.00	< 5.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichlorofluoromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1-Dichloroethene	< 1.00	< 1.00	23.00	55.00	< 1.00	< 1.00	1.00	< 1.00	6.00	4.00	< 1.00	20.00
1,1-Dichloroethane	< 1.00	< 1.00	11.00	92.00	< 1.00	< 1.00	< 1.00	4.00	36.00	5.00	< 1.00	8.80
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	2.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroform	< 1.00	< 1.00	35.00	12.00	< 1.00	73.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00
1,2-Dichloroethane	< 1.00	< 1.00	36.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	8.00	< 1.00	12.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Carbon Tetrachloride	< 1.00	< 1.00	47.00	< 5.00	< 1.00	140.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromodichloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichloropropane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichloroethene	23.00	45.00	110.00	280.00	7.00	65.00	37.00	47.00	23.00	24.00	23.00	39.00
Dibromochloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromoform	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Tetrachloroethene	4.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	3.00	2.00	< 1.00	< 1.00	5.00	< 5.00
1,1,2,2-Tetrachloroethane	NR	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	NR	NR	< 1.00	< 1.00	NR	< 5.00
Chlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00

< Denotes non-detection at indicated detection limit

= Compound concentration is equal to detection limit

\* Duplicate sample analytical results (performed by CKY)

NR Denotes not reported, compound coelutes with Tetrachloroethene and is combined with that result.

Note: All results in micrograms per liter (ug/l)

Laboratory analysis performed by ENSECO except where noted

<p align="center"><b>TABLE 6-2</b>  <b>SOUTHERN CALIFORNIA CHEMICAL</b>  <b>APRIL 1989 QUARTERLY SAMPLING</b>  <b>PURGEABLE AROMATICS ANALYTICAL RESULTS</b></p>												
COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 1.00	< 50.00	< 5.00	< 0.70	< 1.00	< 0.70	< 0.70	< 1.00	< 0.70	< 0.70	< 500.00
Toluene	< 1.00	< 1.00	< 50.00	23.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	7500.00
Ethylbenzene	< 1.00	< 1.00	1200.00	15.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	2600.00
Xylenes, Total	3.00	< 1.00	60.00	50.00	< 1.00	< 1.00	< 1.00	= 1.00	< 1.00	< 1.00	7.00	11000.00
< Denotes non-detection at indicated detection limit						Note: All results in micrograms per liter (ug/l)						
= Compound concentration is equal to detection limit						Laboratory analysis performed by ENSECO						

< Denotes non-detection at indicated detection limit  
= Compound concentration is equal to detection limit

TABLE 6-3  
SOUTHERN CALIFORNIA CHEMICAL  
APRIL 1989 QUARTERLY SAMPLING  
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, total	0.10	0.05	0.07	100.00	0.05	0.04	0.06	= 0.02	0.03	0.06	0.08	0.04
Copper	< 0.02	< 0.02	< 0.02	= 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium, hexavalent	< 0.05	< 0.05	< 0.05	43.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloride	660.00	150.00	420.00	990.00	120.00	80.00	85.00	180.00	120.00	140.00	270.00	120.00
Nitrate (Nitrogen)	< 0.20	7.00	3.10	0.90	5.50	8.20	8.80	3.40	2.80	4.10	6.30	1.70

0.05 mg/l. Cr(VI) was not detected in any of the remaining monitoring wells above the method detection limit of 0.05 mg/l in April 1989. Figure A-3 in Appendix A shows the concentration of Cr(VI) detected at well MW-4 during the April 1989 sampling.

#### Total Chromium (Cr[T])

Historically, Cr(T) has been present at elevated concentrations in ground water samples collected from monitoring wells MW-04 and MW-09. Cr(T) was initially detected in MW-04 at a concentration of 500 mg/l in June 1985, with fluctuations between 61 and 550 mg/l since. Cr(T) was initially detected in MW-09 at a concentration of 0.12 mg/l in June 1987, with fluctuations between 0.06 and 2.75 mg/l since. In January 1989, the concentrations for Cr(T) increased in MW-04, and decreased in MW-09 since the September 1988 sampling. The most recent analytical results from the April 1989 sampling show that the concentrations of Cr(T) at both wells has declined. Figure A-4 shows the concentrations of Cr(T) detected in each well during the sampling.

In previous reports (February 1988, June 1988) Kleinfelder attributed the apparent rise in Cr(T) concentrations after February 1988 to a change in sample preparation, and not a change in ground water quality. Brown & Caldwell, the laboratory that Kleinfelder selected as their analytical laboratory prior to February 1988, used a modification of EPA Method 3010 sample preparation in which the sample was not mixed prior to analysis. CRL, the laboratory that Kleinfelder selected as their analytical laboratory beginning in February 1988, prepared samples in strict accordance with EPA Method 3010. This method requires that samples are well-mixed, keeping all solids in suspension prior to removal of the sample from the sample container. It was believed that this mixing of the sample yielded Cr(T) concentrations that included suspended sediments. Hence, Kleinfelder began in May 1988, the practice of field filtering the ground water samples to be analyzed for metals through a 0.45-micron screen. All samples collected for metals analyses during the April 1989 sampling were filtered in the field using a sterile 0.45-micron filter.

It is interesting to note that during the April 1989 sampling, total chromium was detected in all 12 monitor well samples. As was previously stated in Section 4.1, the federal MCL for chromium has been established at 0.05 mg/l. The fact that total chromium was detected in the upgradient wells MW-01 and MW-02 at concentrations of 0.10 and 0.05 mg/l, respectively, and was found in all other wells could be indicative of a regional ground water contamination problem. Total chromium has consistently been detected in well MW-4 since the inception of ground water monitoring in 1985, and first appeared in 1987 and 1988 at other well locations. Based on a review of the available data, it cannot be established at the present time whether a regional problem does exist. This issue should be resolved during subsequent ground water sampling at the site.

#### Cadmium (Cd)

To date, cadmium has only been detected in ground water samples collected from monitoring well MW-04. Cadmium was initially detected in MW-04 at a concentration 0.78 mg/l in June 1985. Concentrations have varied from non-detection at 0.1 mg/l in June 1987 to 0.92 mg/l in July 1985. The concentration of cadmium has increased since the January 1989 quarterly sample from 0.028 mg/l to 0.05 mg/l. Figure A-5 shows the concentration of cadmium detected in MW-04 during the April 1989 sampling.

#### Zinc (Zn)

Isolated detections of zinc in ground water have occurred in samples from each well since the inception of the quarterly ground water monitoring program. Concentrations have ranged from non-detections at less than 0.001 mg/l to 0.35 mg/l. The most consistent detections have occurred in ground water samples collected from monitoring well MW-01. The concentration of zinc in MW-01 decreased from 0.08 mg/l in September 1988 to 0.015 mg/l in January 1989. At these low levels, the occurrence of zinc does not appear to be of significant concern. Figure A-6 shows that zinc was not detected in any of the 12 wells at a method detection limit of 0.02 mg/l during the April 1989 sampling.

## 6.2 Organic Compounds

Reportedly, organic chemicals have not historically been used on-site by SCC. Organic compounds have been detected, however, in ground water underlying the facility in the Hollydale aquifer, varying in both concentration and lateral extent. The primary organic compounds of concern are the purgeable aromatic compounds and the chlorinated solvent trichloroethylene (TCE), and various forms of dichloroethane and dichloroethene. The individual compounds and the concentrations they have been detected at will be discussed in the following paragraphs.

### Benzene

The appearance of benzene, a known carcinogen, has been very erratic throughout the course of the ground water monitoring program. Benzene has never been detected in wells MW-01, -2, -6b, -8, -9 and -10. In most cases where benzene has historically been detected, reported values have ranged from not detected to a maximum of 20  $\mu\text{g/l}$ . During the January 1989 sampling event, benzene was detected in wells MW-03 and -5 at concentrations of 7.4 and 0.9  $\mu\text{g/l}$ , respectively. Benzene was not detected in any of the 12 wells during the April 1989 sampling.

### Ethylbenzene

During the January 1989 sampling, ethylbenzene was detected in wells MW-03, -4, -7, -10 and -11 at concentrations of 4,900, 15, 1.2, 0.54 and 43  $\mu\text{g/l}$ , respectively. The April 1989 analytical results revealed that the concentration at MW-04 remained the same, while concentrations decreased at MW-03 and increased significantly at MW-11. Ethylbenzene was not detected in the remaining nine wells. Concentrations from the April 1989 sampling are illustrated in Figure A-7 of Appendix A. It should be noted that because of the discrepancy in the duplicate analytical results for well MW-11, both ENSECO and CKY values are shown in Figures A-7 through A-9.

### Total Xylenes

During the January 1989 sampling, total xylenes were detected in wells MW-03, -4, -4a, -7, -8, and -11, at concentrations of 1,500, 29, 1.3, 3.6, 1.6 and 1.5  $\mu\text{g/l}$ , respectively. The April 1989 analytical results revealed that xylene concentrations decreased in wells MW-03 and -7 to 60 and 1.0  $\mu\text{g/l}$ , respectively, and were not detected at all in wells MW-4a and -8. Concentrations increased significantly at well MW-11 and increased slightly to 50  $\mu\text{g/l}$  at well MW-4. Total xylenes were not detected in the remaining six wells. Concentrations from the April 1989 sampling are illustrated in Figure A-8 of Appendix A.

### Toluene

Toluene was detected during the previous round of sampling in January 1989 at wells MW-03, -4, and -7, at concentrations of 17, 10 and 1.4  $\mu\text{g/l}$ . The April 1989 analytical results revealed that the concentrations at wells MW-03 and -7 declined to nondetectable levels, while the concentration at MW-4 increased slightly to 23  $\mu\text{g/l}$ . Toluene was not detected at well MW-11 in January 1989, however, during the April 1989 sampling a significant concentration was found. A review of the analytical results presented in Table 6-2 reveals that, according to the primary laboratory (ENSECO), all purgeable aromatic compounds (with the exception of benzene) were found at greatly elevated levels in the sample collected from well MW-11. CKY duplicate analytical results verified that elevated levels were detected, however, the concentrations reported by ENSECO were from four to 15 times greater than the concentrations reported by CKY. This discrepancy has been discussed at length in Section 4.1 of this document. Concentrations from the April 1989 sampling are illustrated in Figure A-9 of Appendix A.

### Trichloroethylene

As illustrated in Figure A-10 of Appendix A, trichloroethylene (TCE) was detected in all 12 ground water monitoring wells. This was also true during the previous January 1989 quarterly sampling event. TCE concentrations in January 1989 ranged from a high of 120  $\mu\text{g/l}$  in the shallow well at

MW-04 to a low of 6.7  $\mu\text{g}/\text{l}$  in the deep well at that location. In April 1989, the concentrations at those locations ranged from a high of 280 to a low of 7  $\mu\text{g}/\text{l}$ , respectively. Numerous purgeable halocarbon compounds were also detected in wells MW-03, -4, -5, -7, -8, -9 and -11 at concentrations ranging from 2 to 140  $\mu\text{g}/\text{l}$ . Various forms of dichloroethane and dichloroethene, degradation products of trichloroethane and trichloroethene, were the most common of the other constituents detected.

As was the case with total chromium, the detection of TCE at all locations could be indicative of a regional ground water purgeable organic contamination problem. At the present time, it cannot be stated with absolute certainty that a regional problem exists. A review of the analytical results contained in Appendix B reveals that, with minor exceptions, TCE has historically been detected in all on-site monitor wells, including upgradient wells. It would seem that the problem exists well beyond the boundaries of the subject facility. Subsequent ground water sampling, possibly in conjunction with a review of available literature for the surrounding area, should allow for resolution of this issue.

## **Section 7**

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## 7.0 ASSESSMENT QUARTERLY GROUND WATER MONITORING PROGRAM STATUS

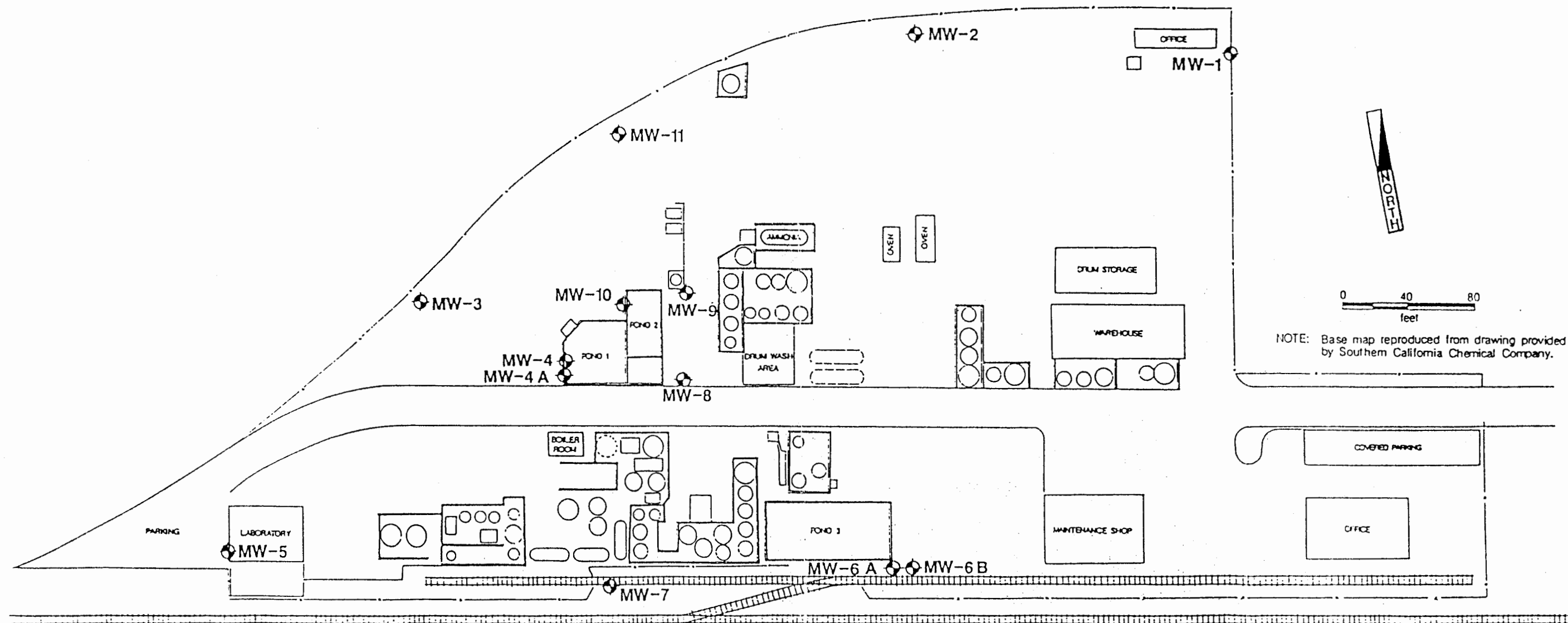
To date, CDM has implemented the field sampling protocols outlined in the Kleinfelder QAPP with minor modification. At this point in time, the Kleinfelder QAPP lacks regulatory approval. CDM has also submitted for regulatory approval a Sampling and Analysis Plan, a Quality Assurance/Quality Control Plan, a Health and Safety Plan, and a Data Management Plan as components of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Workplan promulgated by an Administrative Order on Consent, dated December 8, 1988 by EPA. When these documents are granted final approval, subsequent quarterly ground water sampling programs will follow the specifications and procedures which are contained therein. CDM offers no warranty, expressed or implied, as to the adequacy, accurateness, or appropriateness of the unapproved Kleinfelder QAPP. This document was used as guidance simply on the basis of it being the status quo guidance document for quarterly sampling procedures at SCC in lieu of following procedures outlined in a document approved for the purposes of conducting the pending RCRA Facility Investigation. Included in the next ground water monitoring report (July 1989 quarterly sampling) will be a statistical analysis of both the RCRA and site-specific indicator parameters for the January, April and July 1989 sampling rounds.

## Appendix A

APPENDIX A

FIGURES

- A-1 Monitoring Well Location Map
- A-2 Ground Water Surface Elevation in the  
Hollydale Aquifer, April 1989
- A-3 Concentration of Chromium (HEX) in Ground Water,  
April 1989
- A-4 Concentration of Chromium (TOT) in Ground Water, April 1989
- A-5 Concentration of Cadmium in Ground Water, April 1989
- A-6 Concentration of Zinc in Ground Water, April 1989
- A-7 Concentration of Ethylbenzene in Ground Water, April 1989
- A-8 Concentration of Total Xylenes in Ground Water, April 1989
- A-9 Concentration of Toluene in Ground Water, April 1989
- A-10 Concentration of Trichloroethylene in Ground Water, April 1989



### EXPLANATION


 MONITORING WELL, estimated location

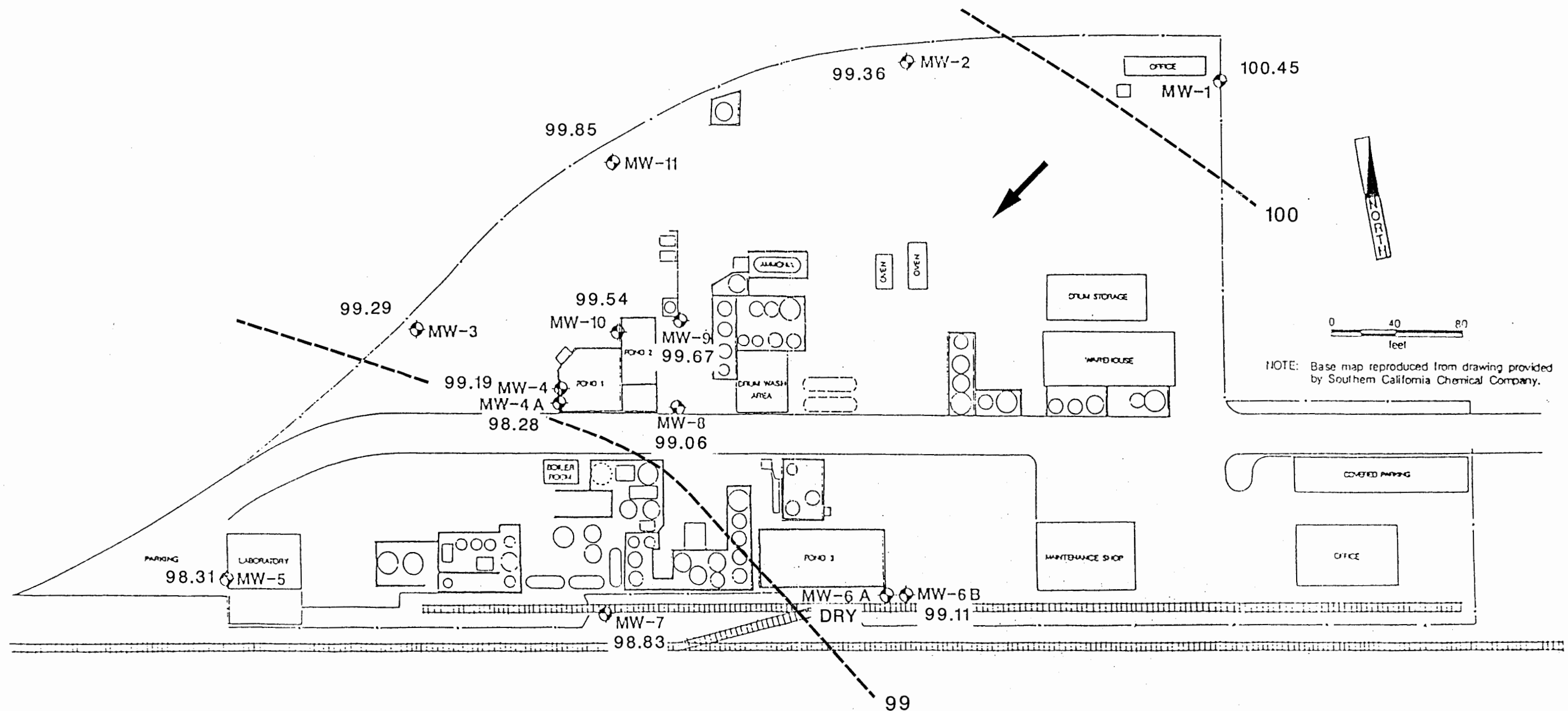
SOUTHERN CALIFORNIA CHEMICAL

MONITORING WELL  
LOCATION MAP

Map adapted from Kleinfelder (8/87)

environmental engineers, scientists  
planners & management consultants **CDM**

FIGURE A-1



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

# EXPLANATION

- MONITORING WELL, estimated location
- Approximate ground water elevation (feet MSL)
- GENERAL GROUND WATER FLOW DIRECTION

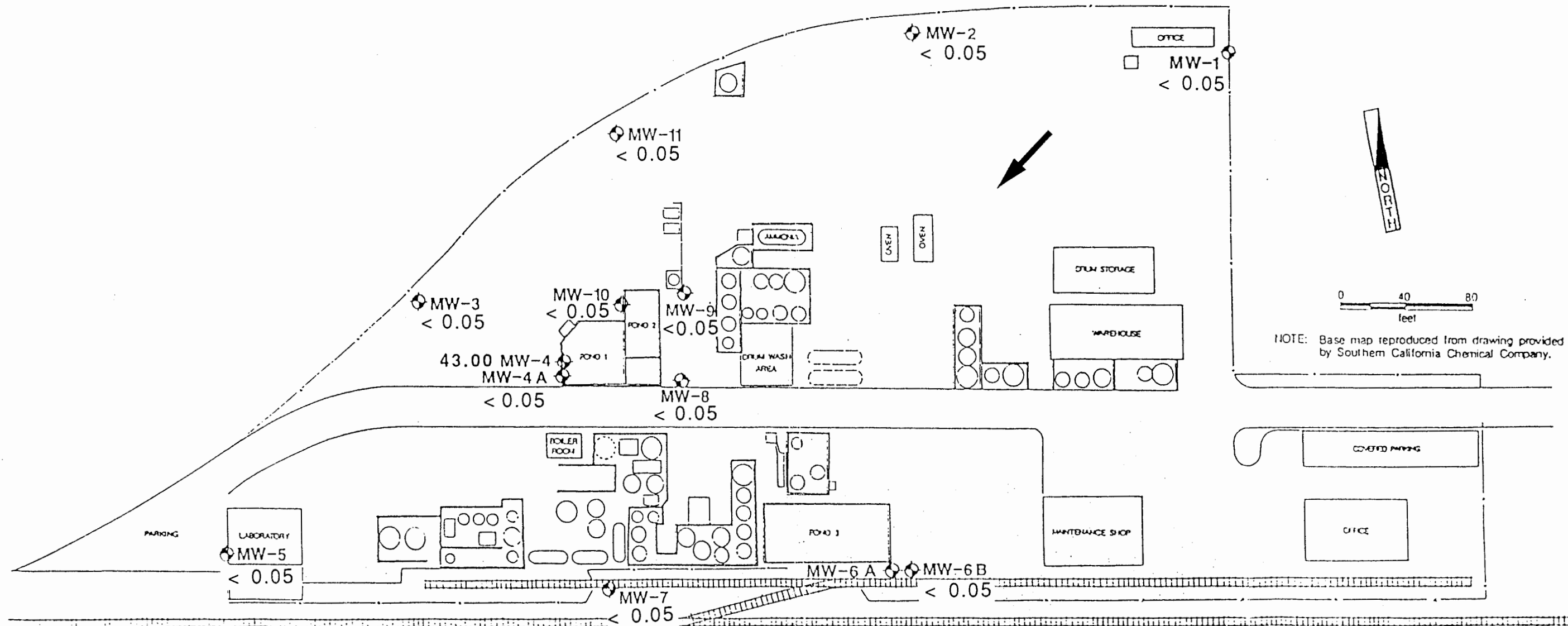
SOUTHERN CALIFORNIA CHEMICAL

GROUND WATER SURFACE ELEVATION  
IN THE HOLLYDALE AQUIFER  
APRIL 1989


Map adapted from Kleinfelder (8/87)

environmental engineers, scientists,  
planners, & management consultants **CDM**

FIGURE A-2



# EXPLANATION

 MONITORING WELL, estimated location  
VALUES EXPRESSED IN mg/l



GENERAL GROUND WATER FLOW DIRECTION

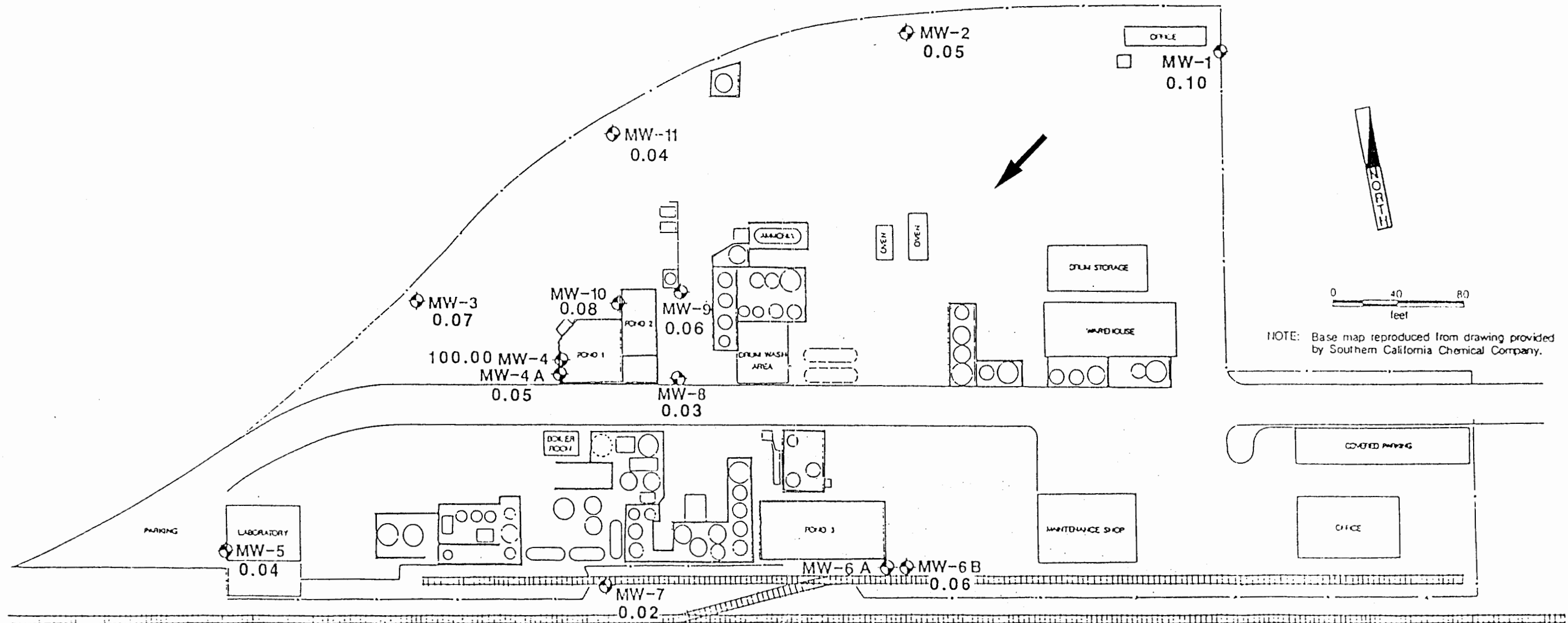
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF CHROMIUM (hex)  
IN GROUND WATER  
APRIL 1989

Map adapted from Kleinfelder (8/87)

environmental engineers, scientists  
planners, & management consultants **CDM**

FIGURE A-3



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

### EXPLANATION

MONITORING WELL, estimated location  
VALUES EXPRESSED IN mg/l

GENERAL GROUND WATER FLOW DIRECTION

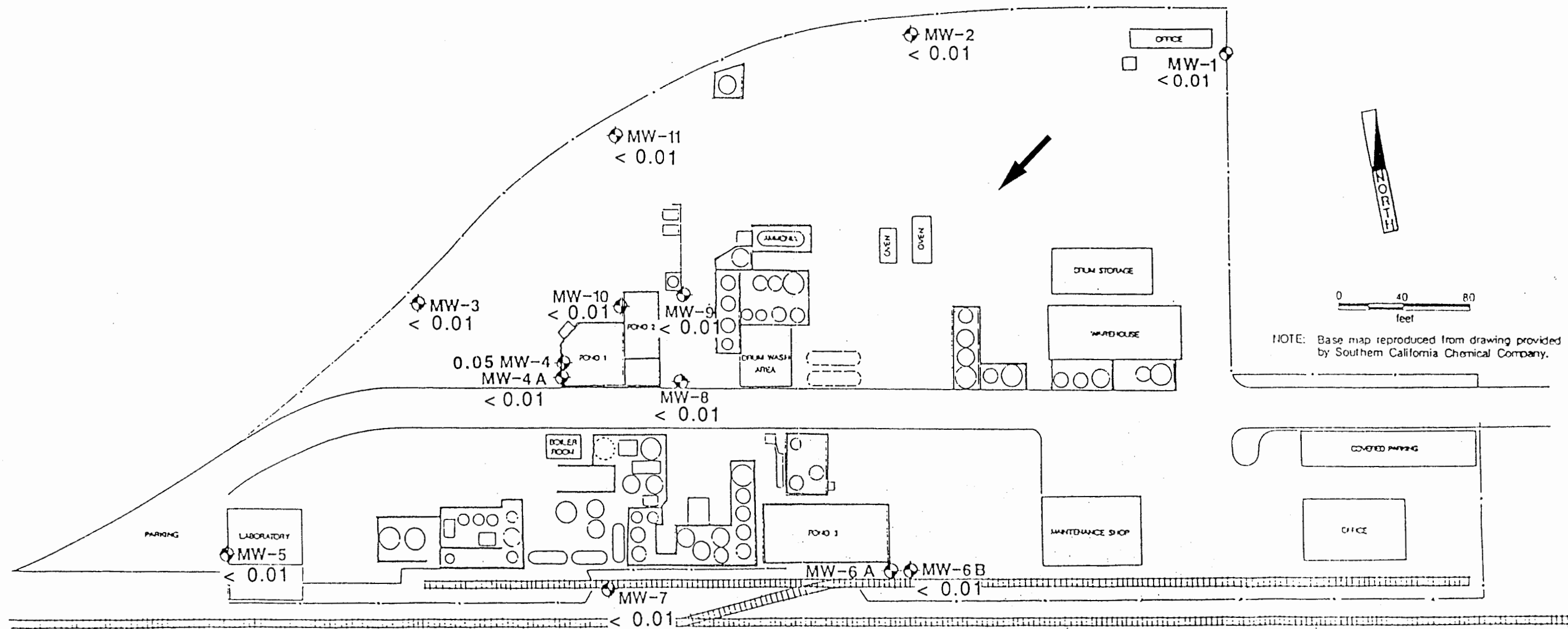
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF CHROMIUM (tot)  
IN GROUND WATER  
APRIL 1989

Map adapted from Kleinfelder (8/87)


environmental engineers, scientists  
planners & management consultants **CDM**

FIGURE A-4



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

### EXPLANATION

 MONITORING WELL, estimated location  
 VALUES EXPRESSED IN mg/l

 GENERAL GROUND WATER FLOW DIRECTION

SOUTHERN CALIFORNIA CHEMICAL

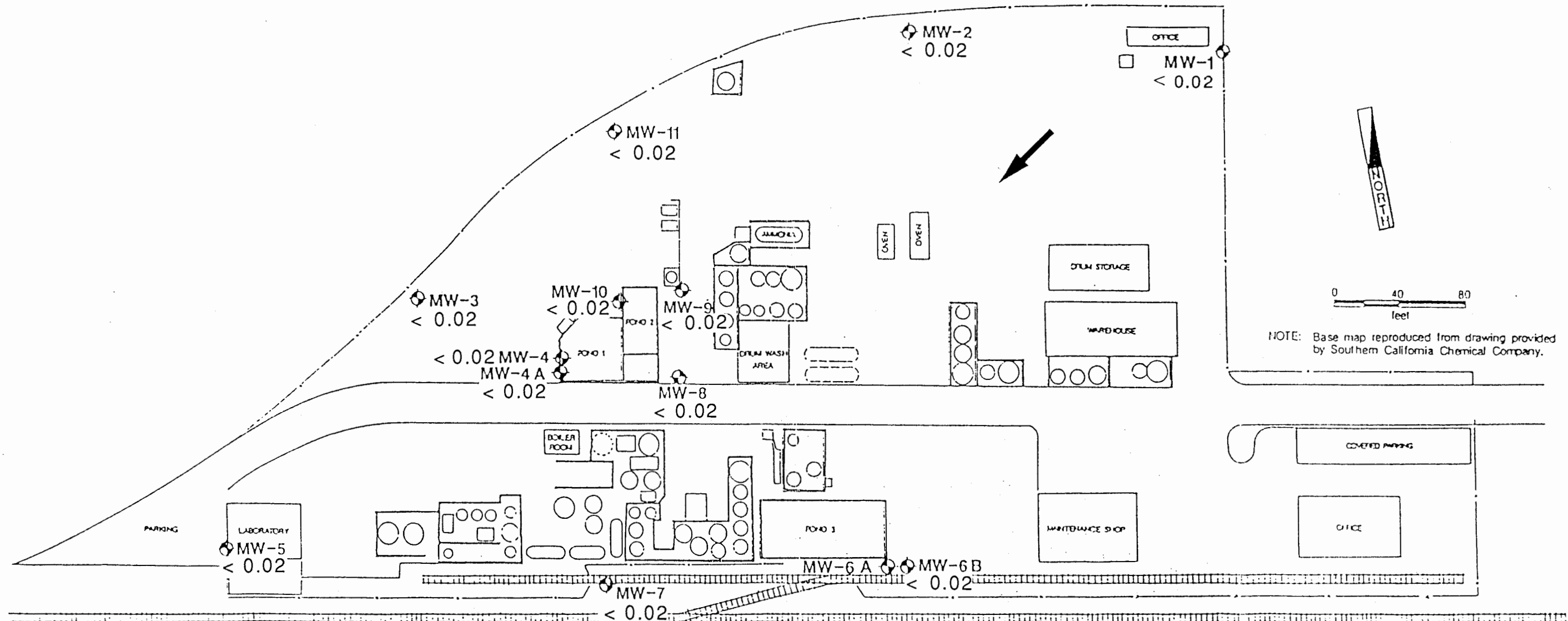
CONCENTRATION OF CADMIUM  
 IN GROUND WATER  
 APRIL 1989

Map adapted from Kleinfelder (8/87)

Environmental engineers, scientists,  
planners & environmental consultants


**CDM**

FIGURE A-5



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

EXPLANATION

 MONITORING WELL, estimated location  
 VALUES EXPRESSED IN mg/l

 GENERAL GROUND WATER FLOW DIRECTION

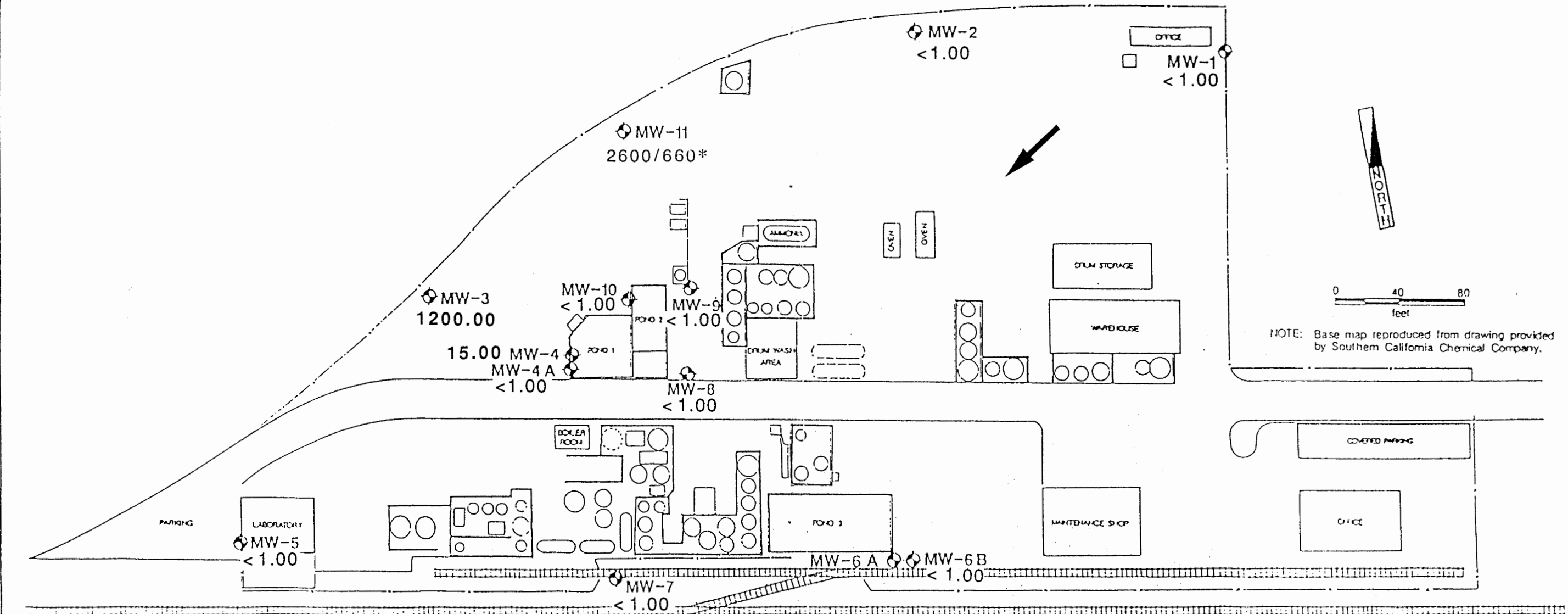
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF ZINC  
 IN GROUND WATER  
 APRIL 1989

Map adapted from Kleinfelder (8/87)

Environmental Engineers, Scientists,  
 Planners, & Management Consultants  
**CDM**

FIGURE A-6



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

### EXPLANATION

- MONITORING WELL, estimated location
- VALUES EXPRESSED IN ug/l
- \*DUPLICATE ANALYSIS

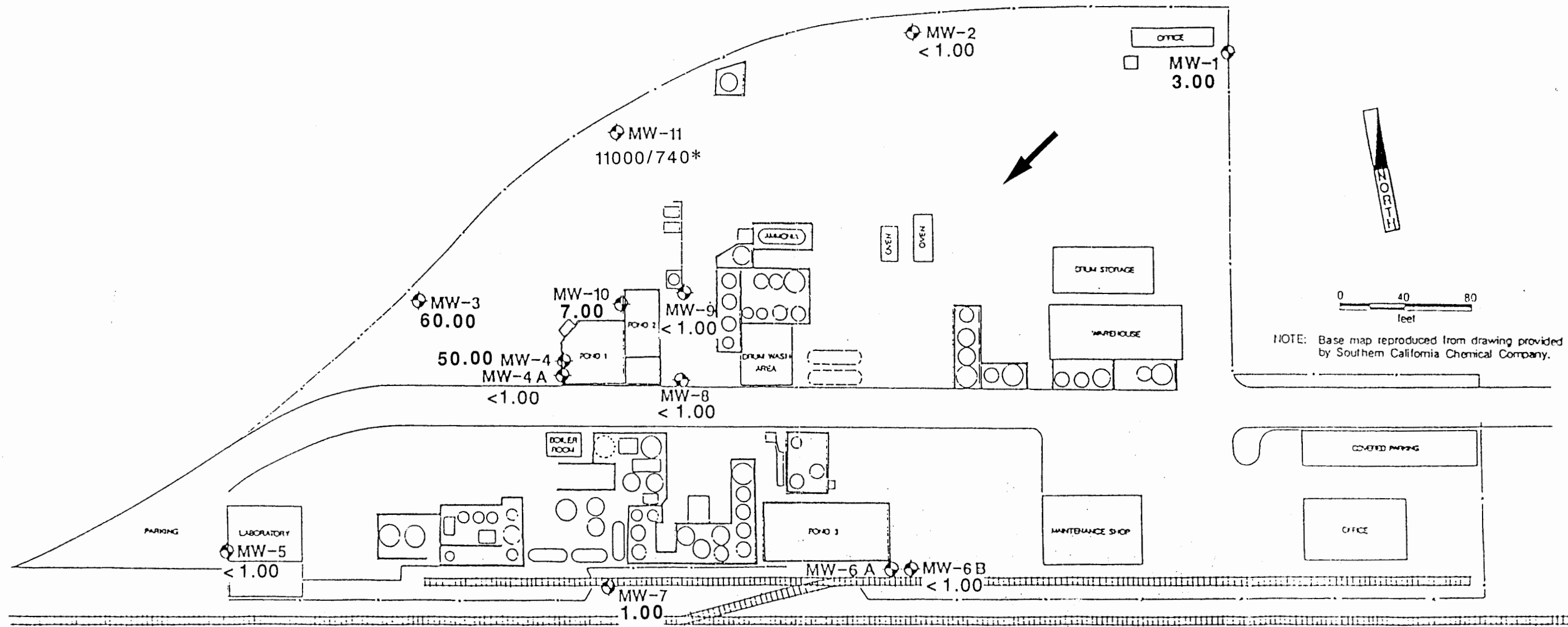
← GENERAL GROUND WATER FLOW DIRECTION

SOUTHERN CALIFORNIA CHEMICAL


CONCENTRATION OF ETHYLBENZENE  
IN GROUND WATER  
APRIL 1989

Map adapted from Kleinfielder (8/87)

environmental engineers, scientists  
planners, & management consultants **CDM** FIGURE A-7



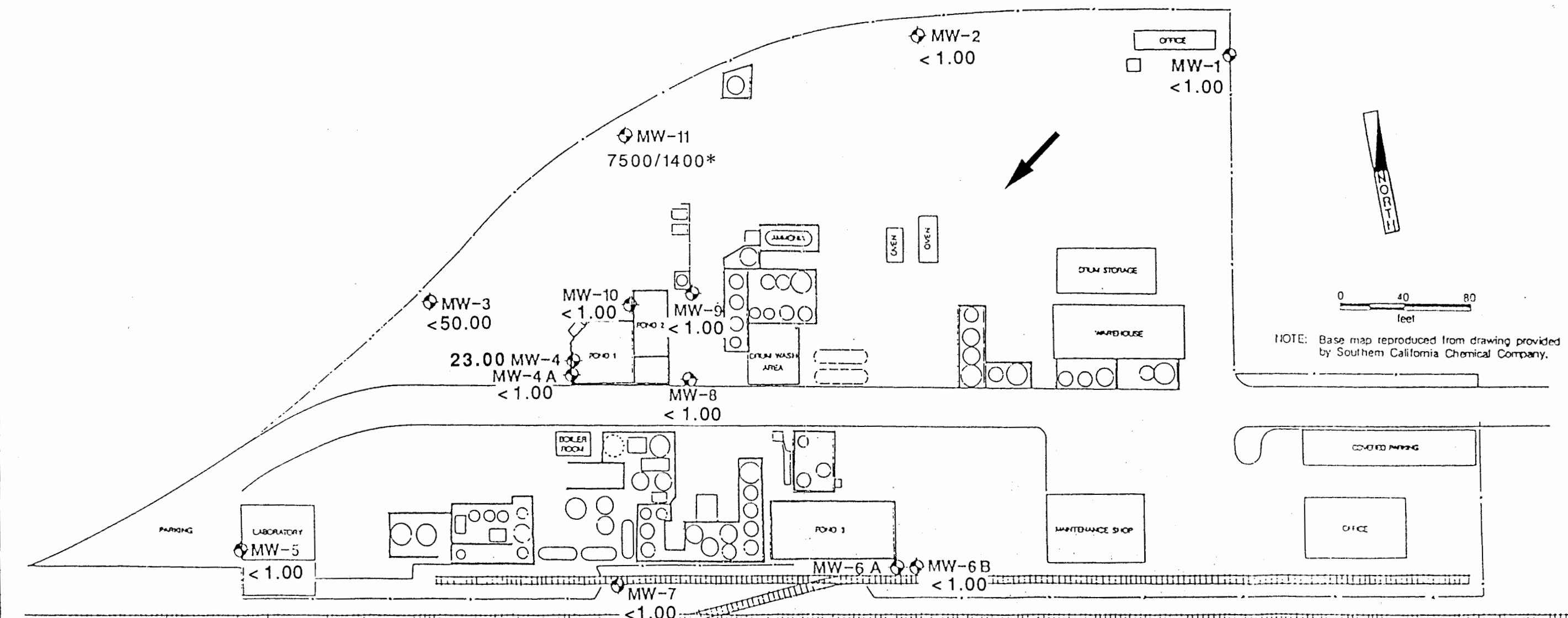
### EXPLANATION

-  MONITORING WELL, estimated location  
 VALUES EXPRESSED IN ug/l  
 \* DUPLICATE ANALYSIS

 GENERAL GROUND WATER FLOW DIRECTION

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL XYLENES  
IN GROUND WATER  
APRIL 1989



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

### EXPLANATION

- MONITORING WELL, estimated location
- VALUES EXPRESSED IN ug/l
- \*DUPLICATE ANALYSIS

← GENERAL GROUND WATER FLOW DIRECTION

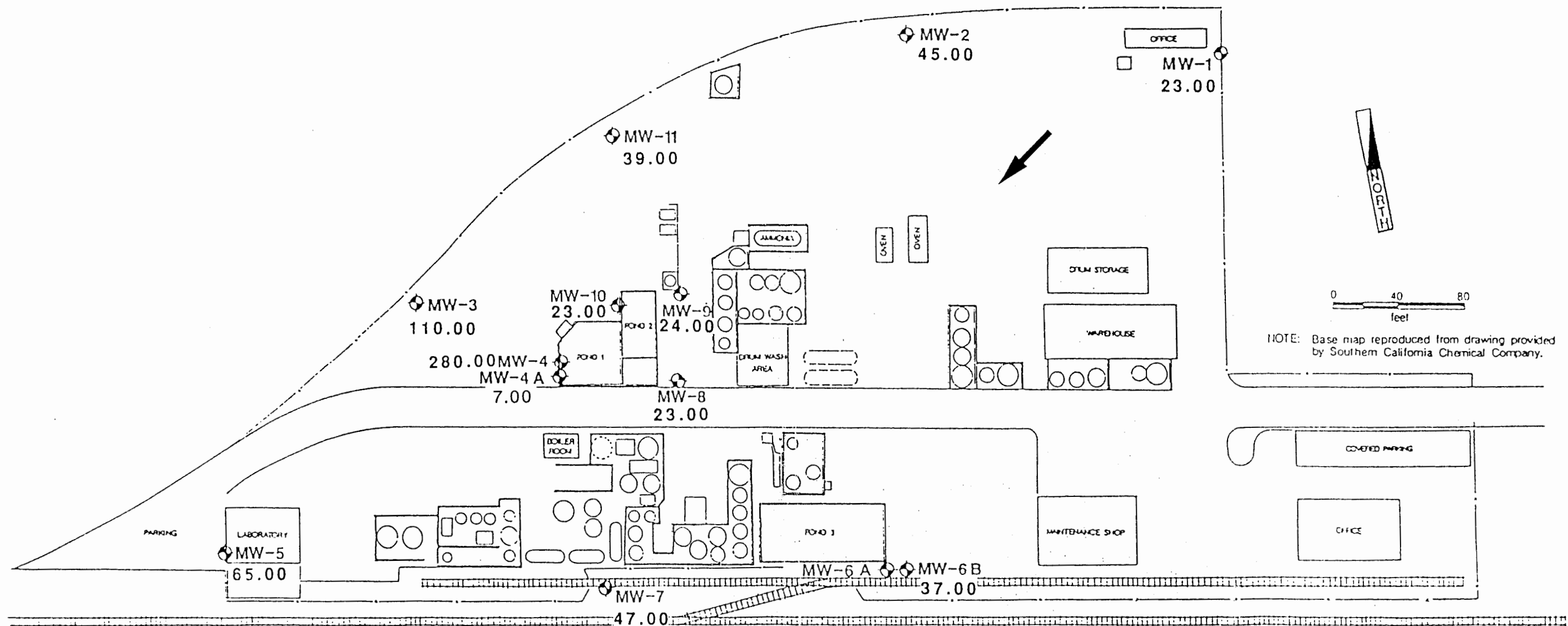
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOLUENE  
IN GROUND WATER  
APRIL 1989

Map adapted from Kleinfelder (8/87)


environmental engineers, scientists,  
planners, & management consultants **CDM**

FIGURE A-9



NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

### EXPLANATION

 MONITORING WELL, estimated location  
 VALUES EXPRESSED IN ug/l

 GENERAL GROUND WATER FLOW DIRECTION

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TRICHLOROETHENE  
IN GROUND WATER  
APRIL 1989

Map adapted from Kleinfelder (8/87)

Environmental engineers, scientists  
planners, & management consultants

**CDM**

FIGURE A-10

Appendix B

APPENDIX B

HISTORICAL GROUND WATER ANALYSES DATA

TABLE 3-1 PRIMARY SAMPLE ANALYSES

January 1989 Quarterly Sampling Southern California Chemical												
HALOGENATED VOLATILE ORGANIC COMPOUNDS *												
(Concentrations in ug/l)												
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
Dichlorodifluoromethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Chloride	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Vinyl Chloride	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Bromide	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Trichlorofluoromethane	ND .05	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethene	ND .01	ND 0.2	ND 0.2	2 2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methylene Chloride	ND 1.0	ND 0.2	3 .2	1 4	ND 0.2	2 .1	ND 0.2	2 .2	ND 0.2	1 6	ND 0.2	1
trans-1,2-Dichloroethene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethane	ND .01	ND 0.2	4 .4	3 6	ND 0.2	ND 0.2	ND 0.2	2 .9	3 0	3 4	2 .8	3 .2
Chloroform	0 .2	ND 0.2	1 3	3 .7	ND 0.2	7 .4	ND 0.2	ND 0.2	ND 0.2	8 .9	ND 0.2	0 .88
1,1,1-Trichloroethane	ND .01	ND 0.2	ND 0.2	0 .68	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	2 .9	ND 0.2	ND 0.2
Carbon Tetrachloride	ND .01	ND 0.2	1 5	ND 0.2	ND 0.2	5 .6	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichloroethane	0 .7	ND 0.2	2 4 0	2 0	ND 0.2	2 9	ND 0.2	ND 0.2	ND 0.2	4 .3	3 .7	2 1
Trichloroethene	1 9	6 0	7 4	1 2 0	6 .7	5 .9	5 7	3 5	6 9	5 5	3 2	3 4
1,2-Dichloropropane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Dichlorobromoethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
2-Chloroethylvinylether	ND 10.0	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
cis-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
trans-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2-Trichloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Tetrachloroethene	2 .8	1 .8	4 .6	1 .6	ND 0.2	ND 0.2	7	2 .1	4 .3	3 .1	1 .2	ND 0.2
Dibromochloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Bromoform	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2,2-Tetrachloroethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,3-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,4-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2

\* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, Colorado.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

January 1989 Quarterly Sampling Southern California Chemical												
AROMATIC VOLATILE ORGANICS, TOTAL ORGANIC CARBON & TOTAL ORGANIC HALOGENS												
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
PURGEABLE AROMATICS *												
(Concentrations in ug/l)												
1,3-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,4-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,2-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Total Xylenes	ND .01	ND 0.5	1500	29	1.3	ND 1.0	ND 1.0	3.6	1.6	ND 1.0	ND 1.0	1.5
Benzene	ND .01	ND 0.5	7.4	ND 0.5	ND 0.5	0.9	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Toluene	ND .01	ND 0.5	17	10	ND 0.5	ND 0.5	ND 0.5	1.4	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Ethylbenzene	ND .01	ND 0.5	4900	15	ND 0.5	ND 0.5	ND 0.5	1.2	ND 0.5	ND 0.5	0.54	43
TOTAL ORGANIC CARBON **												
(Concentrations in mg/l)												
TOC #1	6.9	ND 0.5	160.0	16.0	ND 0.5	65.0	ND 0.5	3.6	1.1	2.1	2.0	5.4
TOC #2	7.8	ND 0.5	160.0	14.0	ND 0.5	64.0	ND 0.5	3.7	1.2	1.7	1.9	5.8
TOC #3	7.1	ND 0.5	160.0	14.0	ND 0.5	63.0	ND 0.5	3.6	1.2	1.8	2.0	5.3
TOC #4	7.6	ND 0.5	160.0	13.0	ND 0.5	63.0	ND 0.5	3.5	1.2	1.5	2.0	5.2
TOTAL ORGANIC HALOGEN **												
(Concentrations in ug/l)												
TOX #1	62	50	220	360	49	58	46	90	130	180	38	58
TOX #2	42	47	230	260	38	42	48	42	110	170	36	38
TOX #3	41	57	220	270	19	42	36	80	92	170	33	40
TOX #4	45	39	220	300	29	37	46	130	130	150	51	46

\* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, CO; \*\* Analyzed by Montgomery Laboratories.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

	January 1989 Quarterly Sampling											
	Southern California Chemical											
	METALS, pH AND ELECTRIC CONDUCTIVITY *											
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
METALS (mg/l)												
Chromium VI (hex)	ND .01	0.017	ND .01	33.0	0.01	ND .010	ND .010	ND .010	ND .010	0.45	ND .010	ND .010
Chlorine	524.0	77.0	302.0	418.0	105.0	98.0	66.0	744.0	145.0	248.0	139.0	110.0
Nitrate (N)	5.2	7.4	0.92	ND 0.2	5.9	0.3	8.7	5.4	5.4	7.8	0.43	2.0
Nitrate (NO3)	22.9	33.0	4.0	ND 0.9	26.0	1.3	38.0	24.0	24.0	34.0	1.9	8.8
Chromium (total)	0.014	0.022	ND .014	400	ND .014	ND .014	ND .014	ND .014	ND .014	0.33	0.029	ND .014
Cadmium	ND .003	ND .003	ND .003	0.028	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003
Zinc	0.015	ND .006	ND .006	0.007	0.008	ND .006	0.021	ND .006	0.009	0.008	ND .006	ND .006
Copper	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009
pH												
Analysis #1	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #2	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #3	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #4	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
EC (umohs/cm)												
Analysis #1	2530	1320	1950	2120	1470	1370	1290	3390	1420	1700	1410	1480
Analysis #2	2500	1320	1890	2120	1470	1370	1290	3390	1420	1680	1410	1480
Analysis #3	2520	1320	1900	2120	1470	1370	1290	3390	1430	1680	1410	1480
Analysis #4	2560	1320	1890	2120	1470	1370	1290	3390	1430	1680	1410	1480

\* Analyzed by Montgomery Laboratories.

TABLE 1  
WATER-QUALITY DATA  
MONITORING WELL #1  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40.265.92)													
pH (units)	7.3		7.1		7.2	7.0	7.38	6.8	7.0	6.9	7.1		7.05	
LOC (mg/l)	3.7		19		35	21	ND 3	ND 3	13	32	10		8.5	
IOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.1		0.038	
Sp. Cond. (micro/cm)	2300		3400		1650	3600	3200	2800	3400	3800	2975		2500	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.08	ND.02	0.03	0.07
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.02	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.01	ND.04	ND.04	ND.02	0.10	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		0.18		0.04	ND.08	0.018	ND.03	0.06	ND.03	0.04		0.07	0.08
Chloride (mg/l)	330		300		650	920	700	570	720	770	430		460	630
Nitrate as N (mg/l)	7.0		3.7		0.5	1.3	4.06	5.3	ND.1	2.3	4.5		5.2	2.9
Nitrate as NO <sub>3</sub> (mg/l)	31		17		18	11	18	23	ND.4	11	19		23	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1		ND1	2	1	1	0.5	1	1	ND1		ND1	
Benzene (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		16		16	18	18	9	11	11	2.4	4		15	
Toluene (ug/l)		ND1		ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)		ND1		ND1	ND1	ND1		ND.5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1		ND1	ND1	ND1	ND1	ND2	ND.5	1.7	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 2  
WATER-QUALITY DATA  
MONITORING WELL #2  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
2/85-3/85 7/85-8/85 3/86 5/86 7/86 9/86 12/86 3/87 6/87-7/87 10/87 2/88 5/88 6/88 9/88														
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.0		7.4		7.7	7.4	7.68	7.1	7.1	7.12	7.27		7.35	
TOC (mg/l)	34		4.8		ND3	ND3	ND3	ND3	ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.04		0.032	
Sp. Concl. (umhos/cm)	2300		1900		1800	2100	2280	1900	3400	1500	1550		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.05	ND.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.03		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.03	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		ND.03		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	0.03		ND.02	0.03
Chloride (mg/l)	270		180		220	410	510	250	700	180	110		160	160
Nitrate as N (mg/l)	2.1		5.8		5.4	5.0	6.25	7.2	8.8	7.2	7.2		7.2	7.1
Nitrate as NO <sub>3</sub> (mg/l)	9.1		26		24	22	27.7	32	39	32	32		32	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	4	3			ND1	5	9	21	20	2.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)	3	ND1			ND1	3	5	0.9	11	0.94	ND1		ND1	
1,2-Dichloroethane (ug/l)	ND1	ND1			3	1	ND1	ND.5	2.2	ND.5	ND1		ND1	
Benzene (ug/l)	ND1	ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)	ND1	ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)	ND1	ND1			ND1	2	2	1	ND.5	0.73	ND1		ND1	
Ethylbenzene (ug/l)	ND1	ND1			3	2	ND1	ND.5	6.2	ND.5	ND1		ND1	
Trichloroethylene (ug/l)	21	22			12	38	67	20	93	40	5		23	
Toluene (ug/l)	ND1	ND1			3	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)	ND1	ND1			2	ND1		ND.5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)	ND1	ND1			ND1	ND1	ND1	ND2	ND.5	11	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 3  
WATER-QUALITY DATA  
MONITORING WELL #3  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
2/85-3/85 7/85-8/85 3/86 5/86 7/86 9/86 12/86 3/87 6/87-7/87 10/87 2/88 5/88 6/88 9/88														
COMPOUND	EPA Indicator Measurement (CFR 40.265.92)													
pH (Units)	7.4		7.0		7.2	7.2	7.55	6.9	7.0	5.9	6.78		7.10	
TOC (mg/l)	16		190		44	29	31	20.5	21	50	135		81	
TOX (mg/l)	0.17		ND.08		.18	.17	.21	.22	.15	.27	.10		0.24	
Sp. Cond. (unhos/cm)	1700		1500		2200	2200	2400	2300	2200	3300	1575		2100	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	ND.02	ND.02	0.07
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.4		ND.05	ND.05
Cadmium (mg/l)	ND.0002	ND.011	ND .009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		0.02	0.02
Zinc (mg/l)	ND.019		0.26		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	ND.02		0.04	0.02
Chloride (mg/l)	170		76		400	520	550	420	380	740	190		350	840
Nitrate as N (mg/l)	3.0		ND 1		6.5	4.1	4.81	3.4	3.8	5.2	ND.2		2.7	4.8
Nitrate as NO <sub>3</sub> (mg/l)	13		ND4.4		29	18	21.3	15	17	23	ND1		12	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	6	ND50	5	4	5	5	4	1.6	6.9	ND10			ND50	ND25
1,1-Dichloroethylene (ug/l)	14	ND50	11	7	13	17	7.8	3.9	15	ND10			ND50	ND25
1,2-Dichloroethane (ug/l)	ND1	ND50	9	6	7	11	18	2.11	ND.5	36			ND50	ND25
Benzene (ug/l)	9	ND50	3	ND1	3	2	ND.5	ND.5	ND.5	ND10			ND35	ND17
Carbon Tetrachloride (ug/l)	73	ND50	78	110	58	87	50	73	87	ND10			ND50	ND25
Chloroform (ug/l)	46	ND50	36	97	33	45	20	22	ND.5	ND10			ND50	ND25
Ethylbenzene (ug/l)	ND1	95000	1100	ND1	310	4	ND.5	ND.5	290	8500			1700	1000
Trichloroethylene (ug/l)	320	ND50	160	170	200	160	98	70	150	14			150	150
Toluene (ug/l)	2	15000	11	ND1	ND1	ND1	ND.5	ND.5	ND.5	8500			550	ND25
Xylene (ug/l)	ND1	20000	2000	ND1	10		ND.5	ND.5	ND.5	23000			850	200
Methylene Chloride (ug/l)	ND1	ND50	ND1	ND1	2	ND1	ND2	ND2	9.6	ND10			ND50	100

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 4  
WATER-QUALITY DATA  
MONITORING WELL #4  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)	6.3		7.1		7.1	6.6	7.4	6.7	6.3	6.3	6.6		6.55	
IOC (mg/l)	36		26		110	79	98	26.5	133	90	46		57	
IOX (mg/l)	ND .05		.26		.19	2.3	1.40	.68	2.10	1.3	.36		0.73	
Sp. Cond. (umhos/cm)	6400		3600		3500	4250	4950	4000	11000	7300	4625		5900	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	500	550	61		120	180	170	98	440	190	140	238	218	180
Chromium (HEX) (mg/l)	500	500			120	180	170	100	430	232	140		84	170
Cadmium (mg/l)	0.78	0.92	0.035		0.04	0.09	0.07	0.05	ND .01	.33	.06		0.13	0.12
Copper (mg/l)	ND .08		ND .02		ND .02	ND .04	ND .03	ND .02	ND .02	ND .02	ND .03		0.04	ND.02
Zinc (mg/l)	0.06		ND .03		ND .04	ND .08	ND .007	ND .03	ND .03	ND .03	ND .03		0.15	ND.02
Chloride (mg/l)	2300		1100		770	1300	1400	960	3500	1800	790		1600	1400
Nitrate as N (mg/l)	18	12	ND 13		0.5	1.3	1.1	ND .1	ND .7	1.3	.2		0.75	3.9
Nitrate as NO <sub>3</sub> (mg/l)	81	55	ND 55		2.4	5.6	5.0	ND .4	ND 3	5.8	1.1		3.3	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		100	100	42	57	61	120	27	110	120	70		130	100
1,1-Dichloroethylene (ug/l)		100	42	34	41	61	67	20	94	110	56		60	50
1,2-Dichloroethane (ug/l)		ND 50	17	34	61	12	140	74	74	100	35		90	70
Benzene (ug/l)		ND 50	16	9	ND 1	ND 10	5	ND 5	ND 5	ND .5	ND 14		20	ND.7
Carbon Tetrachloride (ug/l)		ND 50	ND 1	ND 1	ND 1	ND 10	ND 1	ND 5	ND 5	1.5	ND 20		ND 10	ND10
Chloroform (ug/l)		ND 50	7	3	8	10	12	6.2	30	23	ND 20		23	ND10
Ethylbenzene (ug/l)		3000	36	50	1100	670	220	160	1500	380	70		40	ND10
Trichloroethylene (ug/l)		550	140	170	200	280	290	180	280	190	110		250	250
Toluene (ug/l)		8300	130	25	330	260	220	240	3700	580	180		90	ND10
Xylene (ug/l)		10000	100	30	300	300	300	731	2700	570	200		120	40
Methylene Chloride (ug/l)		100	12	ND 1	17	ND 10	ND 1	27	140	110	ND 20		110	70

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 5  
WATER-QUALITY DATA  
MONITORING WELL #4A  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)	6.8	7.5			7.6	7.5	7.7		7.7	7.2	7.3		7.45	
TOC (mg/l)	40	8.3			ND3	ND3	ND3		ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05	ND.08			ND.08	ND.08	ND.08		.14	ND.03	ND.01		0.15	
Sp. Cond. (umhos/cm)	1500	1500			850	1400	1525		1600	1700	1662		1550	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.03	ND.03			ND.03	ND.03	ND.03		ND.04	ND.04	.03	.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.5				ND.02	ND.02	ND.02		ND.02	ND.02	ND.4		ND.05	ND.05
Cadmium (mg/l)	ND.01	ND.01			ND.01	ND.01	ND.01		ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03		ND.02	ND.02	ND.02		0.02	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.08	ND.007		ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)		100			110	120	130		160	129	97		100	160
Nitrate as N (mg/l)	4.5	7.5			6.1	4.7	6.3		5.4	6.1	3.8		6.1	6.3
Nitrate as NO <sub>3</sub> (mg/l)	20	33			27	21	28		24	27	17		27	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		13			11	3	19		140	1.2	ND1		ND10	
1,1-Dichloroethylene (ug/l)		1			2	ND1	2		50	ND.5	ND1		ND10	
1,2-Dichloroethane(ug/l)		ND1			ND1	ND1	2		1.5	ND.5	ND1		ND10	
Benzene (ug/l)		8			ND1	ND1	ND1		ND.5	ND.5	ND.7		ND7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Chloroform (ug/l)		ND1			ND1	ND1	2		17	ND.5	ND1		ND10	
Ethylbenzene (ug/l)		ND1			ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Trichloroethylene (ug/l)		8			7	3	12		82	3.2	ND1		ND20	
Toluene (ug/l)		ND1			ND1	ND1	ND1		1.5	ND.5	ND1		ND10	
Xylene (ug/l)		ND1			ND1	ND1			ND.5	ND.5	ND1		ND10	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1		11	ND.5	ND1		100	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 6  
WATER-QUALITY DATA  
MONITORING WELL #5  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
2/85-3/85 7/85-8/85 3/86 5/86 7/86 9/86 12/86 3/87 6/87-7/87 10/87 2/88 5/88 6/88 9/88														
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3	7.4	7.3	7.3	7.82	6.9	7.0	7.6	7.06		7.10			
TOC (mg/l)	ND3	4.8	5	3	ND3	ND3	ND3	5	7		21			
TOX (mg/l)	.19	.16	.65	.18	.30	.45	.36	ND.03	.3		0.13			
Sp. Cond. (units/cm)	1700	1200	1400	1100	1220	1400	1400	1300	1537		1400			
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.03	ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.1	ND.02	0.05	0.05		
Chromium (HEX) (mg/l)	ND.05	ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05		
Cadmium (mg/l)	ND.0002	ND.009	ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01		
Copper (mg/l)	ND.08	ND.02	ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02		
Zinc (mg/l)	ND.019	0.18	ND.04	ND.08	ND.001	ND.031	ND.03	ND.03	.4		ND.02	ND.02		
Chloride (mg/l)	2.0	66	79	290	143.5	110	110	100	90		91	93		
Nitrate as N (mg/l)	0.42	8.8	12	8.6	11.13	10	15	3.4	5		14	3.6		
Nitrate as NO <sub>3</sub> (mg/l)	1.9	39	55	38	49.3	45	65	24	22		3.1			
Note: ND 1 = Chemical was not detected at 1 mg/l.														
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	ND1	ND 1	2	2	7	4	5.4	.29	ND1		ND1			
1,1-Dichloroethylene (ug/l)	ND1	ND1	3	3	4	2.7	5.2	.25	ND1		ND1			
1,2-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.3	ND1		7			
Benzene (ug/l)	5	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7			
Carbon Tetrachloride (ug/l)	3	11	45.5	37	68	100	120	99	20		26			
Chloroform (ug/l)	2	10	14.5	16	43	48	50	95	10		18			
Ethylbenzene (ug/l)	ND1	ND1	ND1	6	ND1	ND.5	ND.5	ND.5	ND1		ND1			
Trichloroethylene (ug/l)	10	24	64	36	70	70	59	26	5		18			
Toluene (ug/l)	1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1			
Xylene (ug/l)	ND1	ND1	ND1	ND1		ND.5	7.3	ND.5	ND1		ND1			
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND2	ND.5	4.3	ND1		ND1			

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 7  
WATER-QUALITY DATA  
MONITORING WELL #6B  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40.265.92)														
pH (units)	7.6		7.4		7.5	7.8	7.6	7.1	7.4	7.1	7.13		7.10	
TOC (mg/l)	ND3		6.5		ND3	ND3	ND3	ND3	ND3	9	ND1		ND1	
TOX (mg/l)	0.1		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.03	.02		ND.01	
Sp. Cond. (micro/cm)	1400		1300		1400	1200	1425	1400	1600	1400	1265		1300	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	0.0038		ND.03		ND .03	ND.02	ND.03	ND.04	ND.04	ND.04	.02	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.03		ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		.02	ND.02
Chloride (mg/l)	79		220		82	100	140	92	130	94	61		89	100
Nitrate as N (mg/l)	6.9		8.8		7.0	5.2	6.1	7	8.4	8.4	8.4		7.3	8.0
Nitrate as NO <sub>3</sub> (mg/l)	28		39		31	23	27	31	37	37	37		32	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			ND1	ND1	ND1	ND.5	1.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		30			19	23.5	24	21	20	33	22		21	
Toluene (ug/l)		ND1			ND1	ND1	ND1	ND.5	0.8	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			ND1	ND1		ND.5	7.9	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND.5	2.6	1.2	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 8  
WATER-QUALITY DATA  
MONITORING WELL #7  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40.265.92)													
pH (units)	6.3	7.3			7.4	7.2	7.3	6.5	6.8	7.3	8.94		6.95	
IOC (mg/l)	260	6.5			5	17	ND3	43	7	5	2		4.9	
IOX (mg/l)	0.081	ND.08			ND.08	ND.08	ND.08	ND.08	.11	ND.03	.08		0.18	
Sp. Cond. (umhos/cm)	2700	1700			1900	5600	5850	3700	3300	5000	8500		2800	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.03	ND.03			ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.02	ND.02	0.07	0.04
Chromium (HEX) (mg/l)	ND.5	ND.02			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)	ND.01	ND.009			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03	ND.02	0.08	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.04	0.022	ND.03	0.04	ND.03	ND.02		ND.02	ND.02
Chloride (mg/l)	380	190			280	1800	1700	630	610	1200	1900		570	1400
Nitrate as N (mg/l)	27	5.0			4.3	2.7	4.4	19	25	1.1	ND0.2		ND.2	5.5
Nitrate as NO <sub>3</sub> (mg/l)	120	22			19	12	19.5	82	110	19	ND1		ND1	
Note: ND = 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	2				8	42	30	7.1	14	6	ND1		ND1	
1,1-Dichloroethylene (ug/l)	ND1				2	5	6	ND5	6	.55	ND1		ND1	
1,2-Dichloroethane (ug/l)	ND1				ND1	2	ND1	ND5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)	64				ND1	ND1	ND1	ND5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)	ND1				ND1	ND1	ND1	ND5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)	ND1				ND1	ND1	ND1	8.2	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)	ND1				4	ND1	ND1	1.0	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)	29				67	71	70	180	130	35	24		100	
Toluene (ug/l)	2				5	ND1	ND1	2.2	3.6	ND.5	ND1		ND1	
Xylene (ug/l)	ND1				4	ND1		ND5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)	ND1				ND1	ND1	ND1	ND5	ND.5	1.1	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 9  
WATER-QUALITY DATA  
MONITORING WELL #8  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)	6.6	7.5			7.4	7.4	7.4	6.9	7.1	7.1	7.23		7.25	
IOC (mg/l)	99	7			8	ND3	ND3	ND3	5	ND3	ND1		1.5	
TOX (mg/l)	0.44	.09			ND.08	.10	.15	ND.08	.19	ND.08	.04		.06	
Sp. Cond. (umhos/cm)	2800	1500			1700	1600	1800	2000	2100	1300	1550		1,600	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.05	ND.03			ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.03	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05	ND.02			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.01	ND.009			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		0.05	0.04
Chloride (mg/l)		530			170	270	250	300	300	120	140		190	130
Nitrate as N (mg/l)	1.3	4.2			3.2	2.7	3.2	2.5	2.2	4.3	4.5		3.7	5.7
Nitrate as NO <sub>3</sub> (mg/l)	5.8	39			14	12	14.1	11	10	19	20		16	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		41			76	160	160	55	160	45	50		42	2
1,1-Dichloroethylene (ug/l)		3			8	17	19	5.6	29	5.5	2.8		6	ND1
1,2-Dichloroethane (ug/l)		1			14	14	8	9.5	16	ND.5	ND1		3	30
Benzene (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	ND.7
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	8	ND.5	ND.5	ND.5	ND1		ND1	ND1
Chloroform (ug/l)		ND1			2	2	2	5.6	ND.5	0.55	ND1		ND1	ND1
Ethylbenzene (ug/l)		ND1			2	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	ND1
Trichloroethylene (ug/l)		19			28	52	44	67	51	25	17		27	20
Toluene (ug/l)		ND1			3	ND1	ND1	2.3	ND.5	ND.5	ND1		ND1	ND1
Xylene (ug/l)		ND1			1	ND1		ND.5	ND.5	ND.5	ND1		ND1	ND1
Methylene Chloride (ug/l)		5			ND1	ND1	ND1	ND.5	2.4	3.0	ND1		ND1	ND1
														ND1

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 10  
WATER-QUALITY DATA  
MONITORING WELL #9  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

DATE SAMPLED														
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)	6.4	7.4			7.3	7.0	7.4	6.9	6.8	6.9	7.15		7.0	
TOC (mg/l)	210	14			28	2.8	24	ND3	42	15	3		4.0	
TOX (mg/l)	0.13	.26			.12	.28	.37	.37	.48	.28	.16		0.22	
Sp. Cond. (micro/cm)	2200	2800			2000	2400	2675	2500	3200	3100	2075		1950	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.03	ND.03			ND.03	ND.03	ND.03	ND.04	0.12	.94	1.30	2.42	1.66	2.75
Chromium (HEX) (mg/l)	ND.05	ND.02			ND.02	0.05	ND.02	ND.02	0.05	.59	1.30		0.8	1.5
Cadmium (mg/l)	ND.01	ND.00			ND.01	ND1	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.08	0.018	ND.03	ND.03	ND.03	ND.02		0.05	0.03
Chloride (mg/l)	300	530			250	720	670	470	640	630	290		290	490
Nitrate as N (mg/l)	1.4	8.8			3.2	1.4	3.72	4.1	2.9	8.4	7.2		5.0	7.6
Nitrate as NO <sub>3</sub> (mg/l)	6.3	39			14	6.2	16.5	18	13	37	32		22	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		99			50	360	250	110	140	130	40		ND10	90
1,1-Dichloroethylene (ug/l)		18			18	200	110	44	72	84	50		29	30
1,2-Dichloroethane (ug/l)		10			13	90	52	90	69	ND.5	6		90	ND10
Benzene (ug/l)		ND1			ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND.7		ND7	ND7
Carbon Tetrachloride (ug/l)		ND1			ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Chloroform (ug/l)		20			4	30	22	10	19	28	13		ND10	10
Ethylbenzene (ug/l)		ND1			ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Trichloroethylene (ug/l)		61			3	550	240	150	160	150	17		120	90
Toluene (ug/l)		ND1			ND1	ND5	ND1	0.7	ND2.5	ND.5	ND1		ND10	ND10
Xylene (ug/l)		ND1			ND1	ND5		ND.5	ND2.5	ND.5	ND1		ND10	ND10
Methylene Chloride (ug/l)		110			ND1	ND5	18	29	33	83	35		ND10	10

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 11  
WATER-QUALITY DATA  
MONITORING WELL #10  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40.265.92)													
pH (units)	6.8	7.8			7.6	7.4	7.8	7.4	7.2	7.1	7.51		7.20	
TOC (mg/l)	440	10			130	103	135	33.8	158	56	7		29	
TOX (mg/l)	0.17	ND.08			ND.08	.14	.15	.20	.62	.18	.06		0.22	
Sp. Cond. (umhos/cm)	2100	1300			1600	1400	1550	1600	2100	1900	1355		1800	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.03	ND.03			ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	.05	0.05	0.06
Chromium (HEX) (mg/l)	ND.5				ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.01				ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		0.05	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		0.35	ND.02
Chloride (mg/l)		150			120	150	160	160	260	230	100		210	230
Nitrate as N (mg/l)	ND.1	ND.1			0.1	ND.01	ND.1	ND.1	ND.1	ND.1	ND.2		ND.2	ND.2
Nitrate as NO <sub>3</sub> (mg/l)	ND4.4	ND4.4			0.6	ND.04	ND.4	ND.4	ND.4	ND.4	ND1		ND1	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	ND50	2			6	ND10	20	ND5	23	21	3.7		32	ND5
1,1-Dichloroethylene (ug/l)	ND50	1			7	14	ND20	ND5	41	28	ND1		21	ND5
1,2-Dichloroethane (ug/l)	ND50	17			86	200	270	63	160	93	15		70	40
Benzene (ug/l)	ND50	ND1			ND1	ND10	ND20	ND5	ND2.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)	ND50	ND1			ND1	ND10	ND20	ND5	ND2.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)	50	ND1			ND1	ND10	ND20	ND5	3.1	2.3	ND1		ND10	ND5
Ethylbenzene (ug/l)	6500	68			ND1	2200	1800	330	2000	360	ND1		ND10	ND5
Trichloroethylene (ug/l)	250	29			56	93	120	62	160	130	14		90	60
Toluene (ug/l)	17000	ND1			ND1	36	560	ND5	14	ND.5	ND1		ND10	ND5
Xylene (ug/l)	20000	ND1			70	90	600	120	500	ND.5	ND1		ND10	ND5
Methylene Chloride (ug/l)	100	ND1			ND1	ND10	ND20	ND5	13	1.8	ND1		ND10	14

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 12  
WATER-QUALITY DATA  
MONITORING WELL #11  
SOUTHERN CALIFORNIA CHEMICAL  
PROJECT 50-1014-03

	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40.265.92)													
pH (units)	6.6	7.8			7.2	7.3	7.5	7.5	7.4	7.4	7.34		7.45	
IOC (mg/l)	54	13			120	156	125	26.8	58	61	12		20	
IOX (mg/l)	ND.05	0.1			ND.08	ND.08	.12	.14	.15	ND.08	.07		0.078	
Sp. Cond. (micro/cm)	1600	1600			1700	1600	1800	1700	2100	1600	1895		1500	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.03	ND.03			ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.04	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.5				ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.01	ND.01			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)		ND.02			ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.01	ND.02
Zinc (mg/l)		ND.03			ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)	220	230			180	230	240	170	270	110	86		120	110
Nitrate as N (mg/l)	1.2	2.5			1.1	ND1	0.1	1.2	0.7	1.5	2.2		1.5	1.7
Nitrate as NO <sub>3</sub> (mg/l)	5.2	11			4.8	ND.4	0.5	5.5	3.3	6.8	9.6		65	
Note: ND 1 = Chemical was not detected at 1 mg/l.														
	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		10	4	10	ND200	ND100	6.9	12	2.3	2.5			ND10	ND5
1,1-Dichloroethylene (ug/l)		8	2	5	ND200	ND100	5.0	11	2.6	2.3			ND10	ND5
1,2-Dichloroethane (ug/l)		8	31	17	ND200	130	95	21	89	21			ND10	60
Benzene (ug/l)		ND1	3	ND1	ND200	ND100	1.5	ND.5	ND.5	ND.7			ND7	ND3
Carbon Tetrachloride (ug/l)		ND1	ND1	ND1	ND200	ND100	ND.5	ND.5	ND.5	ND1			ND10	ND5
Chloroform (ug/l)		3	3	10	ND200	ND100	3.3	3.5	1.0	ND1			ND10	ND5
Ethylbenzene (ug/l)		13	1800	2200	6400	3300	ND.5	1200	180	17			ND10	130
Trichloroethylene (ug/l)		110	36	76	ND200	180	46	81	36	20			70	30
Toluene (ug/l)		ND1	5400	5200	14000	7500	3.6	360	ND.5	ND1			ND10	ND5
Xylene (ug/l)		20	4000	1500	10000	3000	220	370	ND.5	ND1			110	ND5
Methylene Chloride (ug/l)		ND1	ND1	ND1	ND200	ND100	1.8	8.4	ND.5	3			ND10	16

Note: ND 1 = Compound was not detected at 1 ug/l.

## **Appendix C**

APPENDIX C

ENESCO ANALYTICAL REPORTS

**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

May 5, 1989

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

ANALYSIS NO.: G-8911531-001/002  
ANALYSES: Miscellaneous  
DATE SAMPLED: 25-Apr-1989  
DATE SAMPLE REC'D: 25-Apr-1989  
PROJECT: Southern California Chemical  
2279-111-GW-SAMP

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8911531-001/002 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

\_\_\_\_\_  
REVIEWED



  
\_\_\_\_\_  
APPROVED

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

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 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-002  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 29-APR-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC MW10-0.0 002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	23.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	5.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

\*Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute. Total response reported as Tetrachloroethene.

**Enseco - CRL / South Coast**

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 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-002  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 29-APR-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC MW10-0.0 002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	7.	ND	1

The Report Cover Letter is an integral part of this report.

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-002  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 27-APR-1989  
 28-APR-1989

Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC MW10-0.0 002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.08	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	270.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	6.3	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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FAX: (714) 891-5917

## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-001  
Date Sampled: 25-APR-1989  
Date Sample Rec'd: 25-APR-1989  
Date Analyzed: 29-APR-1989  
Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC MW1-0.0 002

## Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	23.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	4.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

\*Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute. Total response reported as Tetrachloroethene.

**Enseco - CRL / South Coast**

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 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-001  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 29-APR-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC MW1-0.0 002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	3.	ND	1

**The Report Cover Letter is an integral part of this report.**

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FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-001  
Date Sampled: 25-APR-1989  
Date Sample Rec'd: 25-APR-1989  
Date Analyzed: 27-APR-1989  
28-APR-1989

Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC MW1-0.0 002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.1	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	660.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	ND	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-003  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 1-MAY-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC BG07-0.0 001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-003  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Date Analyzed: 1-MAY-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC BG07-0.0 001

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	1.	ND	1

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**Enseco - CRL / South Coast**

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 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911531-001/003  
 Date Sampled: 25-APR-1989  
 Date Sample Rec'd: 25-APR-1989  
 Sample Type: LIQUID

Project: (#2279-111-GW-SAMP) SO. CALIF. CHEMICAL

**QA/QC Summary**

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
27-APR-1989	CADMIUM (EPA 200.7)	93	72-141	3.	25
27-APR-1989	CHROMIUM (EPA 200.7)	98	69-148	3.	30
27-APR-1989	COPPER (EPA 200.7)	84	68-129	13.	25
27-APR-1989	ZINC (EPA 200.7)	92	73-138	8.	25
28-APR-1989	CHLORIDE (EPA 300.0)	97	77-124	5.	18
28-APR-1989	NITRATE (EPA 300.0)	98	74-132	1.	15
29-APR-1989	1,1-DICHLOROETHENE (EPA 601)	82	60-120	2.	40
1-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	64	60-120	6.	40
29-APR-1989	TRICHLOROETHENE (EPA 601)	91	60-120	0.	40
1-MAY-1989	TRICHLOROETHENE (EPA 601)	73	60-120	15.	40
29-APR-1989	CHLOROBENZENE (EPA 601)	71	60-120	9.	40
1-MAY-1989	CHLOROBENZENE (EPA 601)	64	60-120	30.	40
29-APR-1989	TOLUENE (EPA 602)	118	60-120	4.	40
1-MAY-1989	TOLUENE (EPA 602)	71	60-120	11.	40
29-APR-1989	ETHYLBENZENE (EPA 602)	107	60-120	25.	40
1-MAY-1989	ETHYLBENZENE (EPA 602)	70	60-120	7.	40
29-APR-1989	XYLENES, TOTAL (EPA 602)	110	60-120	36.	40
1-MAY-1989	XYLENES, TOTAL (EPA 602)	75	60-120	23.	40
27-APR-1989	CHROMIUM, HEXAVALENT (EPA 7196)	92	60-130	11.	40

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FAX: (714) 891-5917

May 8, 1989

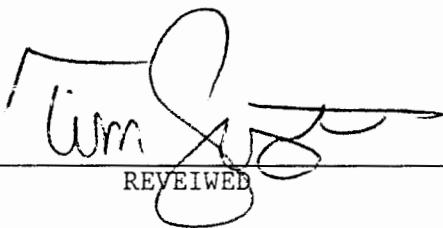
CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No: G-8911627-001/004  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Project: #2279-111-GW-SAMP

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8911627-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

  
REVIEWED

  
APPROVED

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-004  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-BG08-0.0 001

**EPA 624 (EPA 602 ANALYTES)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-004  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-BG08-0.0 001

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715

ATTN: Mr. Jody Edwards  
 Project: SCC # 2279-111-GW-SAMP

Analysis No.: G-8911627-001/004

Date Sampled: 26-APR-1989

Date Sample Rec'd: 26-APR-1989

Sample Type: LIQUID

**QA/QC Summary**

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
28-APR-1989	CADMIUM (EPA 200.7)	99	72-141	3.	25
28-APR-1989	CHROMIUM (EPA 200.7)	104	69-148	1.	30
28-APR-1989	COPPER (EPA 200.7)	102	68-129	1.	25
28-APR-1989	ZINC (EPA 200.7)	100	73-138	3.	25
3-MAY-1989	CHLORIDE (EPA 300.0)	98	77-124	13.	18
3-MAY-1989	NITRATE (EPA 300.0)	102	74-132	2.	15
2-MAY-1989	BENZENE (EPA 624)	99	63-120	5.	12
2-MAY-1989	TOLUENE (EPA 624)	98	68-121	3.	16
2-MAY-1989	1,1-DICHLOROETHENE (EPA 624)	94	58-118	2.	12
2-MAY-1989	TRICHLOROETHENE (EPA 624)	99	69-121	3.	16
2-MAY-1989	CHLOROBENZENE (EPA 624)	101	66-123	4.	13
27-APR-1989	CHROMIUM, HEXAVALENT (EPA 7196)	92	60-130	11.	40

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-001  
 Date Sampled: 26-APR-1989  
 Date Sample Rec'd: 26-APR-1989  
 Date Analyzed: 28-APR-1989  
 3-MAY-1989  
 27-APR-1989

Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
 Sample ID: SCC-MW03-0.0 002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.07	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	420.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	3.1	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-001  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-MW03-0.0 002

**EPA 624 (EPA 602 ANALYTES)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	50
Toluene	ND	ND	50
Ethylbenzene	1,200.	ND	50
Xylenes, Total	60.	ND	50

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Analysis No.: G-8911627-001  
 Date Sampled: 26-APR-1989  
 Date Sample Rec'd: 26-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
 Sample ID: SCC-MW03-0.0 002

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	50
Bromomethane	ND	ND	50
Vinyl Chloride	ND	ND	50
Chloroethane	ND	ND	50
Methylene Chloride	ND	ND	50
Trichlorofluoromethane	ND	ND	50
1,1-Dichloroethene	ND	ND	50
1,1-Dichloroethane	ND	ND	50
trans-1,2-Dichloroethene	ND	ND	50
Chloroform	ND	ND	50
1,2-Dichloroethane	ND	ND	50
1,1,1-Trichloroethane	ND	ND	50
Carbon Tetrachloride	ND	ND	50
Bromodichloromethane	ND	ND	50
1,2-Dichloropropane	ND	ND	50
cis-1,3-Dichloropropene	ND	ND	50
Trichloroethene	120.	ND	50
Dibromochloromethane	ND	ND	50
1,1,2-Trichloroethane	ND	ND	50
trans-1,3-Dichloropropene	ND	ND	50
2-Chloroethylvinyl ether	ND	ND	50
Bromoform	ND	ND	50
Tetrachloroethene	ND	ND	50
1,1,2,2-Tetrachloroethane	ND	ND	50
Chlorobenzene	ND	ND	50
1,3-Dichlorobenzene	ND	ND	50
1,2-Dichlorobenzene	ND	ND	50
1,4-Dichlorobenzene	ND	ND	50

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
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 Irvine, CA 92715  
 ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-002  
 Date Sampled: 26-APR-1989  
 Date Sample Rec'd: 26-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
 Sample ID: SCC-MW05-0.0 002

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	73.	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	140.	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	65.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-002  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 28-APR-1989  
3-MAY-1989  
27-APR-1989

Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-MW05-0.0 002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.04	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	80.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	8.2	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-002  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-MW05-0.0 002

**EPA 624 (EPA 602 ANALYTES)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-003  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 28-APR-1989  
3-MAY-1989  
27-APR-1989

Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-EB04-0.0 001

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	ND	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	7.4	ND	1
Nitrate (Nitrogen) (EPA 300.0)	mg/L	ND	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-003  
Date Sampled: 26-APR-1989  
Date Sample Rec'd: 26-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
Sample ID: SCC-EB04-0.0 001

**EPA 624 (EPA 602 ANALYTES)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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 Irvine, CA 92715  
 ATTN: Mr. Jody Edwards

Analysis No.: G-8911627-003  
 Date Sampled: 26-APR-1989  
 Date Sample Rec'd: 26-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SCC # 2279-111-GW-SAMP  
 Sample ID: SCC-EB04-0.0 001

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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May 8, 1989

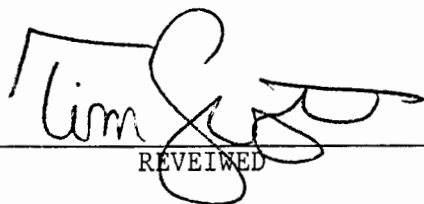
CAMP, DRESSER & MCKEE, INC.  
18881 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No: G-8911729-001/005  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Project: #2279-111-GW-SAMP  
So. Calif. Chemical

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8911729-001/005 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

  
RECEIVED  
APPROVED

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Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-001  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC-MW08-0.0

EPA 624 (EPA 602 ANALYTES)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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## Laboratory Report

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Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-001  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC-MW08-0.0

EPA 624 (EPA 601 Analytes)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	6.	ND	1
1,1-Dichloroethane	36.	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	23.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-003  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC-SC02-0.0

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	7.	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Analysis No.: G-8911729-003  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC-SC02-0.0

**EPA 624 (EPA 602 ANALYTES)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-002  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC-MW04-0.0

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	5
Bromomethane	ND	ND	5
Vinyl Chloride	ND	ND	5
Chloroethane	ND	ND	5
Methylene Chloride	94.	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	55.	ND	5
1,1-Dichloroethane	92.	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	12.	ND	5
1,2-Dichloroethane	ND	ND	5
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
Trichloroethene	280.	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	5
Bromoform	ND	ND	5
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Chlorobenzene	ND	ND	5
1,3-Dichlorobenzene	ND	ND	5
1,2-Dichlorobenzene	ND	ND	5
1,4-Dichlorobenzene	ND	ND	5

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Analysis No.: G-8911729-002  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC-MW04-0.0

EPA 624 (EPA 602 ANALYTES)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	5
Toluene	23.	ND	5
Ethylbenzene	15.	ND	5
Xylenes, Total	50.	ND	5

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-004  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC-MW02-0.0

**EPA 624 (EPA 601 Analytes)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	45.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-004  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
 Sample ID: SCC-MW02-0.0

EPA 624 (EPA 602 ANALYTES)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-005  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC-BC08-0.0

EPA 624 (EPA 601 Analytes)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-005  
Date Sampled: 27-APR-1989  
Date Sample Rec'd: 27-APR-1989  
Date Analyzed: 3-MAY-1989  
Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL  
Sample ID: SCC-BC08-0.0  
6604

EPA 624 (EPA 602 ANALYTES)

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	1
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-001/004  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 3-MAY-1989  
 2-MAY-1989

Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
SCC-MW08-0.0	120.	2.8	ND(0.05)
SCC-MW04-0.0	990.	0.9	43.
SCC-SC02-0.0	86.	1.2	ND(0.05)
SCC-MW02-0.0	150.	7.	ND(0.05)
Blank	ND(0.1)	ND(0.2)	ND(0.05)

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 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8911729-001/004  
 Date Sampled: 27-APR-1989  
 Date Sample Rec'd: 27-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
SCC-MW08-0.0	ND(0.01)	0.03	ND(0.02)	ND(0.02)
SCC-MW04-0.0	0.05	100.	0.02	ND(0.02)
SCC-SC02-0.0	ND(0.01)	0.03	0.05	0.21
SCC-MW02-0.0	ND(0.01)	0.05	ND(0.02)	ND(0.02)
Blank	ND(0.01)	ND(0.02)	ND(0.02)	ND(0.02)

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 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715

ATTN: Mr. Gerald Edwards

Project: (2279-111-GW-SAMP) SO. CALIF. CHEMICAL

Analysis No.: G-8911729-001/005

Date Sampled: 27-APR-1989

Date Sample Rec'd: 27-APR-1989

Sample Type: LIQUID

**QA/QC Summary**

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
2-MAY-1989	CADMIUM (EPA 200.7)	104	72-141	4.	25
2-MAY-1989	CHROMIUM (EPA 200.7)	107	69-148	6.	30
2-MAY-1989	COPPER (EPA 200.7)	94	68-129	3.	25
2-MAY-1989	ZINC (EPA 200.7)	106	73-138	7.	25
3-MAY-1989	CHLORIDE (EPA 300.0)	98	77-124	13.	18
3-MAY-1989	NITRATE (EPA 300.0)	102	74-132	2.	15
1-MAY-1989	BENZENE (EPA 624)	99	63-120	5.	12
1-MAY-1989	TOLUENE (EPA 624)	98	68-121	3.	16
1-MAY-1989	1,1-DICHLOROETHENE (EPA 624)	94	58-118	2.	12
1-MAY-1989	TRICHLOROETHENE (EPA 624)	99	69-121	3.	16
1-MAY-1989	CHLOROBENZENE (EPA 624)	101	66-123	4.	13
2-MAY-1989	CHROMIUM, HEXAVALENT (EPA 7196)	96	60-130	12.	40

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 4-MAY-1989  
8-MAY-1989  
28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW6b-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.06	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	85.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	8.8	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-004  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-BG10-0.0-001

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

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 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS  
 Project: SOUTHERN CALIFORNIA CHEMICAL

Analysis No.: G-8911826-001/004  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Sample Type: LIQUID

**QA/QC Summary**

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
4-MAY-1989	CADMIUM (EPA 200.7)	97	72-141	5.	25
4-MAY-1989	CHROMIUM (EPA 200.7)	95	69-148	4.	30
4-MAY-1989	COPPER (EPA 200.7)	88	68-129	1.	25
4-MAY-1989	ZINC (EPA 200.7)	95	73-138	3.	25
8-MAY-1989	CHLORIDE (EPA 300.0)	103	77-124	0.	18
8-MAY-1989	NITRATE (EPA 300.0)	98	74-132	0.	15
2-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	66	60-120	2.	40
4-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	74	60-120	0.	40
2-MAY-1989	TRICHLOROETHENE (EPA 601)	71	60-120	1.	40
4-MAY-1989	TRICHLOROETHENE (EPA 601)	95	60-120	2.	40
2-MAY-1989	CHLOROBENZENE (EPA 601)	63	60-120	19.	40
4-MAY-1989	CHLOROBENZENE (EPA 601)	61	60-120	15.	40
5-MAY-1989	TOLUENE (EPA 602)	72	60-120	22.	40
4-MAY-1989	TOLUENE (EPA 602)	79	60-120	12.	40
5-MAY-1989	ETHYLBENZENE (EPA 602)	64	60-120	21.	40
4-MAY-1989	ETHYLBENZENE (EPA 602)	84	60-120	37.	40
5-MAY-1989	XYLENES, TOTAL (EPA 602)	75	60-120	0.	40
4-MAY-1989	XYLENES, TOTAL (EPA 602)	66	60-120	3.	40
28-APR-1989	CHROMIUM, HEXAVALENT (EPA 7196)	107	60-130	10.	40

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-004  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-BG10-0.0-001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW6b-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	1	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	37	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	3	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

\*Tetrachloroethene and 1,1,2,2-Tetrachloroethene co-elute.  
 Total result is reported as Tetrachloroethene.

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW6b-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS  
Project: SOUTHERN CALIFORNIA CHEMICAL

Analysis No.: G-8911826-001/004  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Sample Type: LIQUID

## QA/QC Summary

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
4-MAY-1989	CADMIUM (EPA 200.7)	97	72-141	5.	25
4-MAY-1989	CHROMIUM (EPA 200.7)	95	69-148	4.	30
4-MAY-1989	COPPER (EPA 200.7)	88	68-129	1.	25
4-MAY-1989	ZINC (EPA 200.7)	95	73-138	3.	25
8-MAY-1989	CHLORIDE (EPA 300.0)	103	77-124	0.	18
8-MAY-1989	NITRATE (EPA 300.0)	98	74-132	0.	15
2-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	66	60-120	2.	40
4-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	74	60-120	0.	40
2-MAY-1989	TRICHLOROETHENE (EPA 601)	71	60-120	1.	40
4-MAY-1989	TRICHLOROETHENE (EPA 601)	95	60-120	2.	40
2-MAY-1989	CHLOROBENZENE (EPA 601)	63	60-120	19.	40
4-MAY-1989	CHLOROBENZENE (EPA 601)	61	60-120	15.	40
5-MAY-1989	TOLUENE (EPA 602)	72	60-120	22.	40
4-MAY-1989	TOLUENE (EPA 602)	79	60-120	12.	40
5-MAY-1989	ETHYLBENZENE (EPA 602)	64	60-120	21.	40
4-MAY-1989	ETHYLBENZENE (EPA 602)	84	60-120	37.	40
5-MAY-1989	XYLENES, TOTAL (EPA 602)	75	60-120	0.	40
4-MAY-1989	XYLENES, TOTAL (EPA 602)	66	60-120	3.	40
28-APR-1989	CHROMIUM, HEXAVALENT (EPA 7196)	107	60-130	10.	40

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**Laboratory Report**

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 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-002  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 4-MAY-1989  
 8-MAY-1989  
 28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW11-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.04	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	120.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	1.7	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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CAMP DRESSER & MCKEE, INC.  
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 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 4-MAY-1989  
 8-MAY-1989  
 28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW09-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.06	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	140.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	4.1	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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Analysis No.: G-8911826-002  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 4-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW11-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	800	ND	350
Toluene	7500	ND	500
Ethylbenzene	2600	ND	500
Xylenes, Total	11000	ND	500

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 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-002  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 4-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW11-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	500
Bromomethane	ND	ND	500
Vinyl Chloride	ND	ND	500
Chloroethane	ND	ND	500
Methylene Chloride	ND	ND	500
Trichlorofluoromethane	ND	ND	500
1,1-Dichloroethene	ND	ND	500
1,1-Dichloroethane	ND	ND	500
trans-1,2-Dichloroethene	ND	ND	500
Chloroform	ND	ND	500
1,2-Dichloroethane	ND	ND	500
1,1,1-Trichloroethane	ND	ND	500
Carbon Tetrachloride	ND	ND	500
Bromodichloromethane	ND	ND	500
1,2-Dichloropropane	ND	ND	500
cis-1,3-Dichloropropene	ND	ND	500
Trichloroethene	ND	ND	500
Dibromochloromethane	ND	ND	500
1,1,2-Trichloroethane	ND	ND	500
trans-1,3-Dichloropropene	ND	ND	500
2-Chloroethylvinyl ether	ND	ND	500
Bromoform	ND	ND	500
Tetrachloroethene	ND	ND	500
1,1,2,2-Tetrachloroethane	ND	ND	500
Chlorobenzene	ND	ND	500
1,3-Dichlorobenzene	ND	ND	500
1,2-Dichlorobenzene	ND	ND	500
1,4-Dichlorobenzene	ND	ND	500

NOTE: Higher detection limits due to sample matrix.

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 1-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW09-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
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 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW09-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	4.	ND	1
1,1-Dichloroethane	5.	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	8.	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	24	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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May 10, 1989

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No: G-8911826-001/004  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Project: Southern California Chemical

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8911826-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED



APPROVED



The Report Cover Letter is an integral part of this report.

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May 11, 1989

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No: G-8912201-001/006  
Date Sampled: 1-MAY-1989  
Date Sample Rec'd: 2-MAY-1989  
Project: Southern Cal Chemical

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8912201-001/006 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

\_\_\_\_\_  
REVIEWED

   
\_\_\_\_\_  
APPROVED

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## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-001  
Date Sampled: 1-MAY-1989  
Date Sample Rec'd: 2-MAY-1989  
Date Analyzed: 5-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
Sample ID: SCC-BG11-0.0-001

## Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-002  
Date Sampled: 1-MAY-1989  
Date Sample Rec'd: 2-MAY-1989  
Date Analyzed: 5-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
Sample ID: SCC-DIW2-0.0-001

## Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-003  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 10-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
 Sample ID: SCC-MW07-0.0-001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	4.	ND	1
trans-1,2-Dichloroethene	2.	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	47.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	*2.	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

\* Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute. Total response reported as tetrachloroethene.

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-004  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 5-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
 Sample ID: SCC-EB05-0.0-001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-005  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 5-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
 Sample ID: SCC-MW4A-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	7.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-006  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 9-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL  
 Sample ID: SCC-PP03-0.0-001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	80.	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	ND	ND	10
1,1-Dichloroethane	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	10
Chloroform	ND	ND	10
1,2-Dichloroethane	ND	ND	10
1,1,1-Trichloroethane	ND	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	ND	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
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 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-001/006  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 5-MAY-1989  
 10-MAY-1989  
 9-MAY-1989

Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes, Total
	ug/L	ug/L	ug/L	ug/L
	EPA 602	EPA 602	EPA 602	EPA 602
SCC-BG11-0.0-001	ND(0.7)	ND(1)	ND(1)	ND(1)
SCC-DIW2-0.0-001	ND(0.7)	ND(1)	ND(1)	ND(1) ✓
SCC-MWO7-0.0-001	ND(0.7)	ND(1)	ND(1)	1. ✓
SCC-EBO5-0.0-001	ND(0.7)	ND(1)	ND(1)	ND(1) ✓
SCC-MW4A-0.0-002	ND(0.7)	ND(1)	ND(1)	ND(1) ✓
SCC-PPO3-0.0-001	52.	95.	46.	190. ✓
Blank	ND(0.7)	ND(1)	ND(1)	ND(1)

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 18881 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-003/006  
 Date Sampled: 1-MAY-1989  
 Date Sample Rec'd: 2-MAY-1989  
 Date Analyzed: 8-MAY-1989  
 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
SCC-MW07-0.0-001	180	3.4	ND(0.05) ✓
SCC-EBO5-0.0-001	5.4	ND(0.2)	ND(0.05) ✓
SCC-MW4A-0.0-002	120	5.5	ND(0.05) ✓
SCC-PPO3-0.0-001			2.3 ✓
Blank	ND(0.1)	ND(0.2)	ND(0.05) ✓

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## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards

Analysis No.: G-8912201-003/006  
Date Sampled: 1-MAY-1989  
Date Sample Rec'd: 2-MAY-1989  
Date Analyzed: 8-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CAL CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
SCC-MW07-0.0-001	ND(0.01)	0.02	ND(0.02)	ND(0.02)✓
SCC-EBO5-0.0-001	ND(0.01)	ND(0.02)	ND(0.02)	ND(0.02)✓
SCC-MW4A-0.0-002	ND(0.01)	0.05	ND(0.02)	ND(0.02)✓
SCC-PPO3-0.0-001	0.37	4.3	1.3	2.7 ✓
Blank	ND(0.01)	ND(0.02)	ND(0.02)	ND(0.02)✓

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## Laboratory Report

CAMP DRESSER & MCKEE, INC.  
18881 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: Mr. Gerald Edwards  
Project: SOUTHERN CAL CHEMICAL

Analysis No.: G-8912201-001/006  
Date Sampled: 1-MAY-1989  
Date Sample Rec'd: 2-MAY-1989  
Sample Type: LIQUID

## QA/QC Summary

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
8-MAY-1989	CADMIUM (EPA 200.7)	100	72-141	3.	25
8-MAY-1989	CHROMIUM (EPA 200.7)	137	69-148	1.	30
8-MAY-1989	COPPER (EPA 200.7)	101	68-129	3.	25
8-MAY-1989	ZINC (EPA 200.7)	119	73-138	2.	25
8-MAY-1989	CHLORIDE (EPA 300.0)	103	77-124	0.	18
8-MAY-1989	NITRATE (EPA 300.0)	98	74-132	0.	15
5-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	66	60-120	14.	40
10-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	114	60-120	7.	40
9-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	92	60-120	0.	40
10-MAY-1989	TRICHLOROETHENE (EPA 601)	108	60-120	0.	40
5-MAY-1989	TRICHLOROETHENE (EPA 601)	83	60-120	13.	40
9-MAY-1989	TRICHLOROETHENE (EPA 601)	91	60-120	6.	40
5-MAY-1989	CHLOROBENZENE (EPA 601)	60	60-120	7.	40
10-MAY-1989	CHLOROBENZENE (EPA 601)	111	60-120	2.	40
9-MAY-1989	CHLOROBENZENE (EPA 601)	106	60-120	4.	40
9-MAY-1989	TOLUENE (EPA 602)	100	60-120	5.	40
5-MAY-1989	TOLUENE (EPA 602)	89	60-120	29.	40
9-MAY-1989	ETHYLBENZENE (EPA 602)	105	60-120	1.	40
5-MAY-1989	ETHYLBENZENE (EPA 602)	78	60-120	12.	40
9-MAY-1989	XYLENES, TOTAL (EPA 602)	101	60-120	6.	40
5-MAY-1989	XYLENES, TOTAL (EPA 602)	77	60-120	3.	40
8-MAY-1989	CHROMIUM, HEXAVALENT (EPA 7196)	101	60-130	0.	40
2-MAY-1989	CHROMIUM, HEXAVALENT (EPA 7196)	96	60-130	12.	40

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September 8, 1989


CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Suite 650  
Irvine, CA 92715  
ATTN: Mr. Jody Edwards

Analysis No: G-8911826-001/004  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Project: Southern California Chemical

Enclosed with this letter is the amended report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8911826-001/004 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

  
\_\_\_\_\_  
REVIEWED  
\_\_\_\_\_  
APPROVED

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 4-MAY-1989  
8-MAY-1989  
28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW09-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.06	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	140.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	4.1	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW09-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	4.	ND	1
1,1-Dichloroethane	5.	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	8.	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	24	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-001  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 1-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW09-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-002  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 4-MAY-1989  
8-MAY-1989  
28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW11-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.04	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	120.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	1.7	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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**Enseco - CRL / South Coast**

7440 Lincoln Way • Garden Grove, CA 92641  
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL  
 FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-002  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 4-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW11-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	500
Bromomethane	ND	ND	500
Vinyl Chloride	ND	ND	500
Chloroethane	ND	ND	500
Methylene Chloride	ND	ND	500
Trichlorofluoromethane	ND	ND	500
1,1-Dichloroethene	ND	ND	500
1,1-Dichloroethane	ND	ND	500
trans-1,2-Dichloroethene	ND	ND	500
Chloroform	ND	ND	500
1,2-Dichloroethane	ND	ND	500
1,1,1-Trichloroethane	ND	ND	500
Carbon Tetrachloride	ND	ND	500
Bromodichloromethane	ND	ND	500
1,2-Dichloropropane	ND	ND	500
cis-1,3-Dichloropropene	ND	ND	500
Trichloroethene	ND	ND	500
Dibromochloromethane	ND	ND	500
1,1,2-Trichloroethane	ND	ND	500
trans-1,3-Dichloropropene	ND	ND	500
2-Chloroethylvinyl ether	ND	ND	500
Bromoform	ND	ND	500
Tetrachloroethene	ND	ND	500
1,1,2,2-Tetrachloroethane	ND	ND	500
Chlorobenzene	ND	ND	500
1,3-Dichlorobenzene	ND	ND	500
1,2-Dichlorobenzene	ND	ND	500
1,4-Dichlorobenzene	ND	ND	500

NOTE: Higher detection limits due to sample matrix.

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-002  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 4-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW11-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: mg/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.35
Toluene	7.5	ND	0.50
Ethylbenzene	2.5	ND	0.50
Xylenes, Total	1.0	ND	0.50

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FAX: (714) 891-5917

**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
188851 Von Karmen, Ste. 650  
Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 4-MAY-1989  
8-MAY-1989  
28-APR-1989

Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW6b-0.0-002

Parameter	Units	Result	Blank	Detection Limit
Cadmium (EPA 200.7)	mg/L	ND	ND	0.01
Chromium (Total) (EPA 200.7)	mg/L	0.06	ND	0.02
Copper (EPA 200.7)	mg/L	ND	ND	0.02
Zinc (EPA 200.7)	mg/L	ND	ND	0.02
Chloride (EPA 300.0)	mg/L	85.	ND	5
Nitrate (Nitrogen) (EPA 300.0)	mg/L	8.8	ND	0.2
Chromium, Hexavalent (EPA 7196)	mg/L	ND	ND	0.05

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-MW6b-0.0-002

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	1	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	37	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	3	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

\*Tetrachloroethene and 1,1,2,2-Tetrachloroethene co-elute:  
 Total result is reported as Tetrachloroethene.

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**Laboratory Report**

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Irvine, CA 92715  
ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-003  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-MW6b-0.0-002

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-004  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Date Analyzed: 2-MAY-1989  
 Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
 Sample ID: SCC-BG10-0.0-001

**Halogenated Volatile Organics, EPA 601**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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CAMP DRESSER & MCKEE, INC.  
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ATTN: MR. JODY EDWARDS

Analysis No.: G-8911826-004  
Date Sampled: 28-APR-1989  
Date Sample Rec'd: 28-APR-1989  
Date Analyzed: 2-MAY-1989  
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL  
Sample ID: SCC-BG10-0.0-001

**Aromatic Volatile Organics (EPA 602)**

Units: ug/L

Parameter	Result	Blank	Detection Limit
Benzene	ND	ND	0.7
Toluene	ND	ND	1
Ethylbenzene	ND	ND	1
Xylenes, Total	ND	ND	1

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**Laboratory Report**

CAMP DRESSER & MCKEE, INC.  
 188851 Von Karmen, Ste. 650  
 Irvine, CA 92715  
 ATTN: MR. JODY EDWARDS  
 Project: SOUTHERN CALIFORNIA CHEMICAL

Analysis No.: G-8911826-001/004  
 Date Sampled: 28-APR-1989  
 Date Sample Rec'd: 28-APR-1989  
 Sample Type: LIQUID

**QA/QC Summary**

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
4-MAY-1989	CADMIUM (EPA 200.7)	97	72-141	5.	25
4-MAY-1989	CHROMIUM (EPA 200.7)	95	69-148	4.	30
4-MAY-1989	COPPER (EPA 200.7)	88	68-129	1.	25
4-MAY-1989	ZINC (EPA 200.7)	95	73-138	3.	25
8-MAY-1989	CHLORIDE (EPA 300.0)	103	77-124	0.	18
8-MAY-1989	NITRATE (EPA 300.0)	98	74-132	0.	15
2-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	66	60-120	2.	40
4-MAY-1989	1,1-DICHLOROETHENE (EPA 601)	74	60-120	0.	40
2-MAY-1989	TRICHLOROETHENE (EPA 601)	71	60-120	1.	40
4-MAY-1989	TRICHLOROETHENE (EPA 601)	95	60-120	2.	40
2-MAY-1989	CHLOROBENZENE (EPA 601)	63	60-120	19.	40
4-MAY-1989	CHLOROBENZENE (EPA 601)	61	60-120	15.	40
5-MAY-1989	TOLUENE (EPA 602)	72	60-120	22.	40
4-MAY-1989	TOLUENE (EPA 602)	79	60-120	12.	40
5-MAY-1989	ETHYLBENZENE (EPA 602)	64	60-120	21.	40
4-MAY-1989	ETHYLBENZENE (EPA 602)	84	60-120	37.	40
5-MAY-1989	XYLENES, TOTAL (EPA 602)	75	60-120	0.	40
4-MAY-1989	XYLENES, TOTAL (EPA 602)	66	60-120	3.	40
28-APR-1989	CHROMIUM, HEXAVALENT (EPA 7196)	107	60-130	10.	40

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## Appendix D

APPENDIX D

CKY ANALYTICAL REPORTS



# CKY incorporated Environmental Services

Date: 05/04/89  
890436

Camp Dresser & McKee Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. K. Kawaoka

Subject: Laboratory Report  
Project: SCC

CAMP DRESSER & MCKEE INC  
MAY 25 1989  
IRVINE

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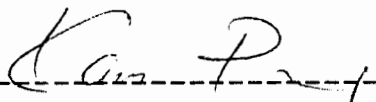
Enclosed is the laboratory report for samples received on 04/26/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 601/602	1 Water
EPA 325.3 Chloride	1 Water
EPA 7197 Chromium VI	1 Water
EPA 353.3 Nitrate	1 Water
EPA 7131 Cadmium	1 Water
EPA 7191 Chromium	1 Water
EPA 7211 Copper	1 Water
EPA 7950 Zinc	1 Water

The results are summarized on seven pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

  
-----  
Dr. Kam Pang  
Laboratory Director



## EPA METHODS - 601/602

```
=====
CLIENT:      Camp Dresser & McKee      DATE REC'D:    04/27/89
PROJECT:     2279-III-GW-Samp/SCC      DATE EXTRACTED: 05/03/89
SAMPLE ID:   MW03-0.0-003             DATE ANALYZED:  05/03/89
CONTROL NO:  890436-1                 MATRIX TYPE:   Water
=====
```

<u>PARAMETERS (601)</u>	<u>RESULTS</u> <u>(ug/L)</u>	<u>DETECTION LIMIT</u> <u>(ug/L)</u>
Dichlorodifluoromethane	ND	5
✓ Chloromethane	ND	5
✓ Vinyl Chloride	ND	5
✓ Bromomethane	ND	5
✓ Chloroethane	ND	5
✓ Trichlorofluoromethane	ND	5
✓ 1,1-Dichloroethene	23	5
✓ Methylene Chloride	ND	5
✓ Trans-1,2-Dichloroethene	ND	5
✓ 1,1-Dichloroethane	11	5
✓ Chloroform	35	5
✓ 1,1,1-Trichloroethane	ND	5
✓ Carbon Tetrachloride	47	5
✓ 1,2-Dichloroethane	36	5
✓ Trichloroethene	110	5
✓ 1,2-Dichloropropane	ND	5
✓ Bromodichloromethane	ND	5
✓ 2-Chloroethylvinylether	ND	5
✓ Trans-1,3-Dichloropropene	ND	5
✓ Cis-1,3-Dichloropropene	ND	5
✓ 1,1,2-Trichloroethane	ND	5
✓ Tetrachloroethene	ND	5
✓ 1,1,1,2-Tetrachloroethane	ND	5
✓ Dibromochloromethane	ND	5
✓ Ethylene Dibromide	ND	5
✓ Chlorobenzene	ND	5
✓ Bromoform	ND	5
✓ 1,1,2,2-Tetrachloroethane	ND	5
✓ Chlorotoluene	ND	5
✓ M-Dichlorobenzene	ND	5
✓ P-Dichlorobenzene	ND	5
✓ Benzylchloride	ND	5
✓ O-Dichlorobenzene	ND	5
 <u>PARAMETERS (602)</u>		
✓ Benzene	ND	5
✓ Toluene	ND	5
✓ Ethylbenzene	670	5
✓ Xylenes	71	5

CKY

EPA METHOD - 325.3  
CHLORIDE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/26/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890436	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L Cl<sup>-</sup>)</u>
SCC-MW03-0.0-003	890436-1	438	8

=====

CKY

EPA METHOD - 7197  
CHROMIUM, HEXAVALENT BY GFAAS

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/26/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	04/27/89
CONTROL NO:	890436	DATE ANALYZED:	04/27/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
SCC-MW03-0.0-003	890436-1	0.0035	0.0010

=====

CKY

EPA METHOD - 353.3  
NITRATE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890436	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/NO<sub>3</sub><sup>-</sup>N/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/NO<sub>3</sub><sup>-</sup>N/L)</u>
SCC-MW03-0.0-003	890436-1	3.80	1

=====

CKY

METALS BY ATOMIC ABSORPTION

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
SAMPLE ID:	MW03-0.0-003	DATE ANALYZED:	05/02/89
CONTROL NO:	890436	MATRIX TYPE:	Water

=====

<u>PARAMETERS</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
Cadmium	<0.01	0.01
Chromium	<0.01	0.01
Copper	<0.05	0.05
Zinc	<0.05	0.05

CKY

QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890436

METHOD EPA 7197  
MATRIX: Water

SAMPLE ID: 890436-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Chromium (VI)	0.0035	0.20	123	108	13

METHOD Metals by Atomic Absorption  
MATRIX: Water

SAMPLE ID: 890373-04

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Copper	0.006	2.0	100	100	0
Cadmium	ND	1.0	100	98	2
Chromium	ND	2.0	90	90	0

METHOD Metal by Atomimic Absorption  
MATRIX: Water

SAMPLE ID: 890438-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Zinc	0.02	0.04	100	100	0



## QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890436

METHOD 601/602  
MATRIX: Water

SAMPLE ID: Blank Water

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (ppb)	<u>AMOUNT SPIKED</u> (ppb)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
1,1 DCE	ND	20	80	85	6
TC(E)	ND	20	100	95	5
Chlorobenzene	ND	20	90	85	6
Benzene	ND	20	110	95	15
Toluene	ND	20	90	90	0



## **C K Y incorporated Environmental Services**

Date: 05/04/89  
890438

Camp Dresser & McKee, Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. K. Kawaoka

Subject: Laboratory Report  
Project: SCC

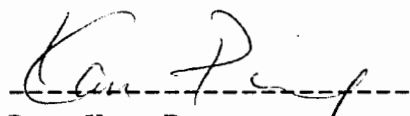
-----  
Enclosed is the laboratory report for samples received on 04/27/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 601/602	1 Water
EPA 7131 Cadmium	1 Water
EPA 7191 Chromium	1 Water
EPA 7211 Copper	1 Water
EPA 7950 Zinc	1 Water
EPA 325.3 Chloride	1 Water
EPA 353.3 Nitrate	1 Water
EPA 7197 Chromium VI	1 Water

The results are summarized on seven pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

  
-----  
Dr. Kam Pang  
Laboratory Director

CKY

EPA METHODS - 601/602

```
=====
CLIENT:      Camp Dresser & McKee      DATE REC'D:    04/27/89
PROJECT:     2279-III-GW-Samp/SCC      DATE EXTRACTED: 05/03/89
SAMPLE ID:   MW04-0.0-003             DATE ANALYZED:  05/03/89
CONTROL NO:  890438-1                 MATRIX TYPE:   Water
=====
```

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	54	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	74	5
Chloroform	25	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	58	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	210 ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5
<u>PARAMETERS (602)</u>		
Benzene	ND	5
Toluene	14	5
Ethylbenzene	9.0	5
Xylenes	43	5

210  
swalli

CKY

METALS BY ATOMIC ABSORPTION

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/27/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
SAMPLE ID:	MW04-0.0-003	DATE ANALYZED:	05/02/89
CONTROL NO:	890438	MATRIX TYPE:	Water

=====

<u>PARAMETERS</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
Cadmium	0.08	0.01
Chromium	92	0.01
Copper	<0.05	0.05
Zinc	<0.05	0.05

CKY

EPA METHOD - 325.3  
CHLORIDE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/27/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890438	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L Cl<sup>-</sup>)</u>
SCC-MW04-0.0-003	890438-1	932	8

=====



## EPA METHODS - 601/602

=====

CLIENT:	Camp Dresser & McKee	DATE REC'D:	04/27/89
PROJECT:	2279-III-GW-Samp/SCC	DATE EXTRACTED:	05/03/89
SAMPLE ID:	MWII-0.0-003	DATE ANALYZED:	05/03/89
CONTROL NO:	890439-1	MATRIX TYPE:	Water

=====

<u>PARAMETERS (601)</u>	<u>RESULTS</u> <u>(ug/L)</u>	<u>DETECTION LIMIT</u> <u>(ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	20	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	8.8	5
Chloroform	15	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	12	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	39 ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5

*Swallow*

<u>PARAMETERS (602)</u>		
Benzene	ND	5
Toluene	1400	5
Ethylbenzene	660	5
Xylenes	740	5

CKY

METALS BY ATOMIC ABSORPTION

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
SAMPLE ID:	MWII-0.0-003	DATE ANALYZED:	05/02/89
CONTROL NO:	890439	MATRIX TYPE:	Water

=====

<u>PARAMETERS</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
Cadmium	<0.01	0.01
Chromium	<0.01	0.01
Copper	<0.05	0.05
Zinc	<0.05	0.05

=====

CKY

EPA METHOD - 325.3  
CHLORIDE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890439	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L CL<sup>-</sup>)</u>	<u>DETECTION LIMIT</u> <u>(mg/L Cl<sup>-</sup>)</u>
SCC-MWII-0.0-003	890439-1	179	8

=====

CKY

EPA METHOD - 7197  
CHROMIUM, HEXAVALENT BY GFAAS

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	04/29/89
CONTROL NO:	890439	DATE ANALYZED:	04/29/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
SCC-MWII-0.0-003	890439-1	0.0016	0.0010

=====

CKY

EPA METHOD - 353.3  
NITRATE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890439	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L NO<sub>3</sub><sup>-</sup>)</u>	<u>DETECTION LIMIT</u> <u>(mg/L N)</u>
SCC-MWII-0.0-003	890439-1	29	1

=====



# QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890439

METHOD EPA 7197  
MATRIX: Water

SAMPLE ID: 890439-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Chromium (VI)	0.0016	0.20	129	139	7

METHOD Metals by Atomic Absorption  
MATRIX: Water

SAMPLE ID: 890373-04

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Copper	0.006	2.0	100	100	0
Cadmium	ND	1.0	100	98	2
Chromium	ND	2.0	90	90	0

METHOD Metal by Atomimic Absorption  
MATRIX: Water

SAMPLE ID: 890438-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Zinc	0.02	0.04	100	100	0



# QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890439

METHOD 601/602  
MATRIX: Water

SAMPLE ID: Blank Water

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (ppb)	<u>AMOUNT SPIKED</u> (ppb)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
1,1 DCE	ND	20	80	85	6
TC(E)	ND	20	100	95	5
Chlorobenzene	ND	20	90	85	6
Benzene	ND	20	110	95	15
Toluene	ND	20	90	90	0

## EPA METHOD 601/602

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=====
CLIENT:      Camp Dresser & McKee, Inc.  DATE REC'D:      04/28/89
PROJECT:     SCC/2279-III-GW-SAMP        DATE EXTRACTED:  05/03/89
SAMPLE ID:   MWII-0.0-003               DATE ANALYZED:   05/03/89
CONTROL NO:  890439-1                   MATRIX TYPE:     Water
=====

```

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	20	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	8.8	5
Chloroform	15	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	12	5
Trichloroethene	39	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5

PARAMETERS (602)

Benzene	ND	5
Toluene	1,400	5
Ethylbenzene	660	5
Xylenes	740	5



# CKY incorporated Environmental Services

Date: 05/04/89  
890511

Camp Dresser & McKee Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. K. Kawaoka

Subject: Laboratory Report  
Project: SCC/2279-III-GW-SAMP

-----

Enclosed is the laboratory report for samples received on 05/02/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 601/602	2 Water
EPA 7131 Cadmium	2 Water
EPA 7191 Chromium	2 Water
EPA 7211 Copper	2 Water
EPA 7950 Zinc	2 Water
EPA 325.3 Chloride	1 Water
EPA 7197 Chromium VI	2 Water
EPA 353.3 Nitrate	1 Water

The results are summarized on nine pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

Dr. Kam Pang  
Laboratory Director



## EPA METHODS - 601/602

=====

CLIENT:	Camp Dresser & McKee	DATE REC'D:	04/27/89
PROJECT:	2279-III-GW-Samp/SCC	DATE EXTRACTED:	05/03/89
SAMPLE ID:	MW07-0.0-003	DATE ANALYZED:	05/03/89
CONTROL NO:	890511-1	MATRIX TYPE:	Water

=====

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	15	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	6.3	5
Chloroform	13	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5

*swallow*

*ND*

PARAMETERS (602)

Benzene	ND	5
Toluene	ND	5
Ethylbenzene	ND	5
Xylenes	ND	5



## EPA METHODS - 601/602

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=====
CLIENT:      Camp Dresser & McKee      DATE REC'D:    04/27/89
PROJECT:     2279-III-GW-Samp/SCC      DATE EXTRACTED: 05/03/89
SAMPLE ID:   PP02-0.0-001             DATE ANALYZED:  05/03/89
CONTROL NO:  890511-2                 MATRIX TYPE:   Water
=====
```

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	13	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Chloroform	13	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5

PARAMETERS (602)

Benzene	83	5
Toluene	140	5
Ethylbenzene	100	5
Xylenes	220	5

CKY

METALS BY ATOMIC ABSORPTION

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
SAMPLE ID:	MW07-0.0-003	DATE ANALYZED:	05/02/89
CONTROL NO:	890511-01	MATRIX TYPE:	Water

=====

<u>PARAMETERS</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
Cadmium	<0.01	0.01
Chromium	<0.01	0.01
Copper	<0.05	0.05
Zinc	<0.05	0.05

=====



METALS BY ATOMIC ABSORPTION

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/28/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
SAMPLE ID:	PP02-0.0-001	DATE ANALYZED:	05/02/89
CONTROL NO:	890511-02	MATRIX TYPE:	Water

=====

<u>PARAMETERS</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
Cadmium	0.43	0.01
Chromium	4.9	0.01
Copper	1.5	0.05
Zinc	3.5	0.05

=====

CKY

EPA METHOD - 325.3  
CHLORIDE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	05/02/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890511	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L CL<sup>-</sup>)</u>	<u>DETECTION LIMIT</u> <u>(mg/L Cl<sup>-</sup>)</u>
SCC-MW07-0.0-003	890511-1	177	8
SCC-MW07-0.0-003	890511-1 (dup.)	177	8

=====

CKY

EPA METHOD - 7197  
CHROMIUM, HEXAVALENT BY GFAAS

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	05/02/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/02/89
CONTROL NO:	890511	DATE ANALYZED:	05/02/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
SCC-MW07-0.0-003	890511-1	0.0016	0.0010
SCC-PP02-0.0-001	890511-2	0.18	0.0010

=====

CKY

EPA METHOD - 353.3  
NITRATE

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	05/02/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	05/05/89
CONTROL NO:	890511	DATE ANALYZED:	05/05/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg NO<sub>3</sub><sup>-</sup>N/L)</u>	<u>DETECTION LIMIT</u> <u>(mg NO<sub>3</sub><sup>-</sup>N/L)</u>
SCC-MW07-0.0-003	890511-1	4.8	1

=====



## QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890511

METHOD EPA 7197  
MATRIX: Water

SAMPLE ID: 890439-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Chromium (VI)	0.0016	0.20	129	139	7

METHOD Metals by Atomic Absorption  
MATRIX: Water

SAMPLE ID: 890373-04

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Copper	0.006	2.0	100	100	0
Cadmium	ND	1.0	100	98	2
Chromium	ND	2.0	90	90	0

METHOD Metal by Atomimic Absorption  
MATRIX: Water

SAMPLE ID: 890438-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Zinc	0.02	0.04	100	100	0



# QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890511

METHOD 601/602  
MATRIX: Water

SAMPLE ID: Blank Water

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (ppb)	<u>AMOUNT SPIKED</u> (ppb)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
1,1 DCE	ND	20	80	85	6
TC(E)	ND	20	100	95	5
Chlorobenzene	ND	20	90	85	6
Benzene	ND	20	110	95	15
Toluene	ND	20	90	90	0



## CKY incorporated Environmental Services

Date: 08/25/89  
890438

Camp Dresser & McKee, Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. Keith Kawaoka

Subject: Ammended Laboratory Report  
Project: SCC/2279-III-GW-SAMP

-----

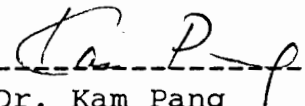
Enclosed is the ammended laboratory report for samples received on 04/27/89 and a photocopy of raw data concerning that sample. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 353.3 Nitrate	1 Water

The results are summarized on one page.

Please feel free to call if you have any questions concerning these results.

Sincerely,

  
-----  
Dr. Kam Pang  
Laboratory Director

EPA METHOD 353.2  
NITRATE/NITRITE

=====

CLIENT:	Camp Dresser & McKee	DATE REC'D:	04/27/89
PROJECT:	SCC/2279-III-GW-Samp	DATE ANALYZED:	05/03/89
CONTROL NO:	890438-1	MATRIX TYPE:	Water

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u>	
		<u>(mg/L NO<sub>2</sub>-)</u>	<u>(mg/L NO<sub>3</sub>-)</u>
SCC-MW04-0.0-003	890438-1	ND	1.0

DETECTION LIMIT for the above sample is 1 mg/L.

=====





## **C K Y incorporated Environmental Services**

Date: 08/22/89  
890438, 890439, 890511

Camp Dresser & Mckee, Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. Keith Kawaoka

Subject: Ammended Laboratory Report  
Project: SCC/2279-III-GW-SAMP

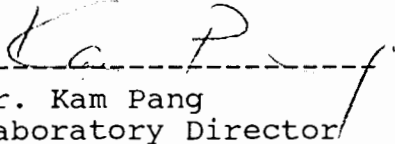
-----  
Enclosed is the ammended laboratory report for samples received on 04/27/89, 04/28/89 and 05/02/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 8010 (HVOC)	3 Water

The results are summarized on three pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

  
-----  
Dr. Kam Pang  
Laboratory Director

## EPA METHOD 601/602

```

=====
CLIENT:      Camp Dresser & McKee, Inc.  DATE REC'D:      04/27/89
PROJECT:     SCC/2279-III-GW-SAMP        DATE EXTRACTED:   05/03/89
SAMPLE ID:   MW04-0.0-003               DATE ANALYZED:    05/03/89
CONTROL NO:  890438-1                   MATRIX TYPE:      Water
=====

```

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	54	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	74	5
Chloroform	25	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	58	5
Trichloroethene	210	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5
<u>PARAMETERS (602)</u>		
Benzene	ND	5
Toluene	14	5
Ethylbenzene	9.0	5
Xylenes	43	5

## EPA METHOD 601/602

```

=====
CLIENT:      Camp Dresser & McKee, Inc.  DATE REC'D:      05/02/89
PROJECT:     SCC/2279-III-GW-SAMP        DATE EXTRACTED:  05/03/89
SAMPLE ID:   MW07-0.0-003               DATE ANALYZED:   05/03/89
CONTROL NO:  890511-1                   MATRIX TYPE:     Water
=====

```

<u>PARAMETERS (601)</u>	<u>RESULTS (ug/L)</u>	<u>DETECTION LIMIT (ug/L)</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	15	5
Methylene Chloride	ND	5
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	6.3	5
Chloroform	13	5
1,1,1-Trichloroethane	41	5
Carbon Tetrachloride	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
2-Chloroethylvinylether	ND	5
Trans-1,3-Dichloropropene	ND	5
Cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Dibromochloromethane	ND	5
Ethylene Dibromide	ND	5
Chlorobenzene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorotoluene	ND	5
M-Dichlorobenzene	ND	5
P-Dichlorobenzene	ND	5
Benzylchloride	ND	5
O-Dichlorobenzene	ND	5

PARAMETERS (602)

Benzene	ND	5
Toluene	ND	5
Ethylbenzene	ND	5
Xylenes	ND	5

CKY

EPA METHOD - 353.3  
NITRATE

CLIENT:	Camp Dresser & McKee	DATE REC'D:	04/27/89
PROJECT:	2279-III-GW-Samp/SCC	DATE EXTRACTED:	05/03/89
SAMPLE ID:	MW04-0.0-003	DATE ANALYZED:	05/03/89
CONTROL NO:	890438-1	MATRIX TYPE:	Water

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/NO<sub>3</sub><sup>-</sup>N/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/NO<sub>3</sub><sup>-</sup>N/L)</u>
SCC-MW04-0.0-003	890438-1	<del>128</del> - unk	1

yellow coloration  
interference  
(colorimetric [purple]  
test)  
so data unreliable

CKY

EPA METHOD - 7197  
CHROMIUM, HEXAVALENT BY GFAAS

=====

CLIENT:	Camp Dresser & McKee Inc.	DATE REC'D:	04/27/89
PROJECT:	2279-111-GW-Samp/SCC	DATE EXTRACTED:	04/28/89
CONTROL NO:	890438	DATE ANALYZED:	04/28/89
MATRIX TYPE:	Water		

=====

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DETECTION LIMIT</u> <u>(mg/L)</u>
SCC-MWO4-0.0-003	890438-1	90	0.0010

=====



# QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890438

METHOD EPA 7197  
MATRIX: Water

SAMPLE ID: 890436-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Chromium (VI)	0.0035	0.20	123	108	13

METHOD Metals by Atomic Absorption  
MATRIX: Water

SAMPLE ID: 890373-04

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Copper	0.006	2.0	100	100	0
Cadmium	ND	1.0	100	98	2
Chromium	ND	2.0	90	90	0

METHOD Metal by Atomimic Absorption  
MATRIX: Water

SAMPLE ID: 890438-01

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (mg/L)	<u>AMOUNT SPIKED</u> (mg/L)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
Zinc	0.02	0.04	100	100	0



## QUALITY CONTROL DATA

CLIENT: Camp Dresser & McKee Inc.  
PROJECT: SCC/2279-III-GW-Samp  
CKY I.D.: 890438

METHOD 601/602  
MATRIX: Water

SAMPLE ID: Blank Water

<u>COMPOUND</u>	<u>SAMPLE RESULTS</u> (ppb)	<u>AMOUNT SPIKED</u> (ppb)	<u>% REC.</u>	<u>DUP. % REC.</u>	<u>RPD</u>
1,1 DCE	ND	20	80	85	6
TC(E)	ND	20	100	95	5
Chlorobenzene	ND	20	90	85	6
Benzene	ND	20	110	95	15
Toluene	ND	20	90	90	0



# CKY incorporated Environmental Services

Date: 05/04/89  
890439

Camp Dresser & McKee Inc.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Mr. K. Kawaoka

Subject: Laboratory Report  
Project: SCC/2279-III-GW-SAMP

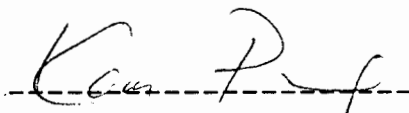
-----  
Enclosed is the laboratory report for samples received on 04/28/89. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported includes:

<u>Method</u>	<u>No. of Analysis</u>
EPA 601/602	1 Water
EPA 7131 Cadmium	1 Water
EPA 7191 Chromium	1 Water
EPA 7211 Copper	1 Water
EPA 7850 Zinc	1 Water
EPA 325.3 Chloride	1 Water
EPA 7197 Chromium VI	1 Water
EPA 353.3 Nitrate	1 Water

The results are summarized on seven pages.

Please feel free to call if you have any questions concerning these results.

Sincerely,

  
-----  
Dr. Kam Pang  
Laboratory Director

## Appendix E

APPENDIX E

WCAS ANALYTICAL REPORTS

May 4, 1989

CAMP DRESSER & MCKEE, INC.  
18881 Von Karman, Suite 650  
Irvine, CA 92715

Attn: Gerald Edwards

JOB NO. 12567

**WCAS**

**WEST COAST  
ANALYTICAL  
SERVICE, INC.**

ANALYTICAL CHEMISTS

---

LABORATORY REPORT

---

Samples Received: Three (3) liquids in quadruplicate

Date Received: 4-27-89


Purchase Order No: Proj#: 2279-111-GW-SAMP


The samples were analyzed as follows:

<u>Samples Analyzed</u>	<u>Analysis</u>	<u>Results</u>
One (1) liquid	Halogenated and Aromatic Volatile Organics by EPA 601/602	Data Sheet
One (1) liquid	Hexavalent Chromium by EPA 7196/IC	Quant Report
One (1) liquid	Selected Metals by ICPMS	Table I

Page 1 of 2

---

  
Michael Shelton  
Senior Chemist

  
B. Michael Hovanec  
Senior Staff Chemist

---

Client: CAMP DRESSER & McKEE, INC.

Job Number 12567

Date Analyzed: 4-28-89

Hexavalent Chromium (Cr6)  
Quantitative Analysis Report  
Ion Chromatography- EPA 7196/IC

Parts Per Billion

WCAS-3

Blank  
DL

Chromium(Cr6) 9.65

5

ND-Not Detected. The detection limit (DL) is stated above.  
Because of sample interferences, Sample DLs may differ from Blank DLs.

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

CAMP DRESSER & MCKEE, INC.  
Mr. Gerald Edwards

Job # 12567  
May 4, 1989

---

LABORATORY REPORT

---

TABLE I

Parts Per Million (mg/L)

Total Metals

<u>Sample ID</u>	<u>Chromium</u>	<u>Cadmium</u>	<u>Copper</u>	<u>Zinc</u>
WCAS-2	5	0.44	1.6	3.5
Detection Limit	0.0004	0.0001	0.001	0.006

Date Analyzed: 5-1-89

Client: CAMP DRESSER & MCKEE, INC.  
Job No: 12567  
Date  
Analyzed: 03-May-89  
Analysis: EPA 601/602 (8010/8020)

Sample: WCAS-1  
Matrix: Water  
Samp Amt: 5 mL  
Dil Fact: 1

Compound	Concentration ug/L	Detection Limits
✓ Chloromethane	ND	1
✓ Bromomethane	ND	1
✓ Vinyl Chloride	ND	0.6
✓ Chloroethane	ND	1
✓ Methylene Chloride	53	5
✓ 1,1-Dichloroethylene	ND	0.6
✓ 1,1-Dichloroethane	ND	0.4
✓ trans-1,2-Dichloroethylene	ND	0.3
✓ Trichlorofluormethane	ND	0.4
✓ Chloroform	ND	0.3
✓ 1,2-Dichloroethane	ND	0.4
✓ 1,1,1-Trichloroethane	ND	0.3
✓ Carbon Tetrachloride	ND	0.3
✓ Bromodichloromethane	ND	0.3
✓ 1,1,2,2-Tetrachloroethane	ND	0.3
✓ 1,2-Dichloropropane	ND	0.3
✓ trans-1,3-Dichloropropylene	ND	0.3
✓ Trichloroethylene	ND	0.3
✓ Dibromochloromethane	ND	0.3
✓ 1,1,2-Trichloroethane	ND	0.3
✓ Benzene	120	0.2
✓ cis-1,3-Dichloropropylene	ND	0.3
✓ 2-Chloroethyl Vinyl Ether	ND	0.8
✓ Bromoform	ND	0.5
✓ Tetrachloroethylene	ND	0.3
✓ Toluene	140	0.3
✓ Chlorobenzene	ND	1
✓ Ethylbenzene	70	0.2
✓ Total Xylenes	190	0.5
✓ 1,3-Dichlorobenzene	ND	0.2
✓ 1,4-Dichlorobenzene	ND	0.2
✓ 1,2-Dichlorobenzene	ND	0.2

ND-Not Detected. The limit of detection is reported above.

# CHAIN OF CUSTODY RECORD

Client Name: Camp, Dresser, McKee Phone No. 714-752-5452  
 Fax No. \_\_\_\_\_  
 Proj. No. 2279-111-GW-SAMP  
 Technical Contact: Gerald Edwards Proj. Name \_\_\_\_\_

WEST COAST ANALYTICAL SERVICE, Inc.  
 9840 Alburdis Avenue  
 Santa Fe Springs, CA 90670  
 Phone 213/948-2225 FAX 213/948-5850

JOB NO. 12567

Sample No.	Sample Description/Remarks	Analyses Requested											
		601/602	601/602/20	Cr6									
WCAS-1	WATER	X											
WCAS-2	WATER		X										
WCAS-3	WATER			X									

Total No. of Containers.....		
Relinquished by: (Company & Signature)	Received for Lab by:	Date/Time
<u>Bub Olson WCAS</u>	<u>Bub Olson WCAS</u>	<u>4-27-89 10:50</u>
White copy: Job Envelope Yellow Copy: Return with Lab Results Pink Copy: Client at time of sample delivery		

## **Appendix F**

APPENDIX F

COMPLETED COC FORMS

## CHAIN OF CUSTODY RECORD

Camp Dresser &amp; McKee Inc.

9/15/31

CDM

PROJECT NAME SOUTHERN CAL. CHEM.PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book

Reference No. \_\_\_\_\_

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLE NUMBER		DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES										NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
						EXTRA ORG.	VOA 601/602	PEST./PCB	TRACE METALS	CO, CR, CU, ZN	CI	NO3	CS, SE					
SCC	MW1-0.0	002	4/25/89	10:35	2x 40 mil	LIQUID	X								2			
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓						X			1			
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓						X			1			
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓					X				1			
SCC	MW10-0.0	002	4/25/89	16:00	2x 40 mil	↓	X								2			
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓							X		1			
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓						X			1			
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓						X			1			
SCC	BG07-0.0	001	4/25/89	16:15	2x 40 mil	↓	X								2			
SCC	MW1-0.0	002 <sup>gm</sup>	4/25/89	10:35	1x .250 LITER	LIQUID					X				1			
SCC	MW10-0.0	002	4/25/89	16:00	1x .50 LITER						X				1			

SAMPLED BY (SIGN)

Gregg R. MengerP.Q. # C0421891 LJC

RELINQUISHED BY (SIGN)

① G.R. Menger  
DATE/TIME (4/25/89 17:00)

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

\_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

① \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

② \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

METHOD OF SHIPMENT

Hand Delivery/ Cooler

SHIPPED BY (SIGN)

\_\_\_\_\_

RECEIVED FOR LABORATORY BY (SIGN)

\_\_\_\_\_

DATE/TIME

(4/25/89, 5:45 pm)

## CHAIN OF CUSTODY RECORD

Camp Dresser &amp; McKee Inc.

9/11/53

CDM

PROJECT NAME SOUTHERN CAL. CHEM.PROJECT NUMBER 2279-111-GW-SAMPField Log Book  
Reference No. \_\_\_\_\_

SAMPLE NUMBER		DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES								NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
						EXTRA ORG	VOA 601/602	PEST. PCB	TRACE METALS	CO, CR, CU, ZN	CI	NO3	CPYL			
SCC	MW1-0.0	002	4/25/89	10:35	2x 40 mil	LIQUID	X							2		
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓						X		1		
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓							X	1		
SCC	MW1-0.0	002	4/25/89	↓	1x .25 LITER	↓					X			1		
SCC	MW10-0.0	002	4/25/89	16:00	2x 40 mil	↓	X							2		
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓							X	1		
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓						X		1		
SCC	MW10-0.0	002	4/25/89	↓	1x .25 LITER	↓					X			1		
SCC	BG07-0.0	001	4/25/89	16:15	2x 40 mil	↓	X							2		
SCC	MW1-0.0	002 <sup>gm</sup>	4/25/89	10:35	1x .250 LITER	LIQUID				X				1		
SCC	MW10-0.0	002	4/25/89	16:00	1x .50 LITER					X				1		
						</										

SAMPLED BY (SIGN)

Gregg R. MongerP.Q. # C0421891 WSC

RELINQUISHED BY (SIGN)

① Gregg R. MongerDATE/TIME ( 4/25/89 / 17:00 )

RELINQUISHED BY (SIGN)

② \_\_\_\_\_

DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

③ \_\_\_\_\_

DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_

DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_

DATE/TIME ( / / )

RECEIVED BY (SIGN)

① \_\_\_\_\_

DATE/TIME ( / / )

RECEIVED BY (SIGN)

② \_\_\_\_\_

DATE/TIME ( / / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_

DATE/TIME ( / / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_

DATE/TIME ( / / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_

DATE/TIME ( / / )

METHOD OF SHIPMENT

Hand Delivery / Cooler

SHIPPED BY (SIGN)

\_\_\_\_\_

RECEIVED FOR LABORATORY BY (SIGN)

nothing

DATE/TIME

( 4/25/89 , 5:45 pm )

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

# CHAIN OF CUSTODY RECORD

# Camp Dresser & McKee Inc.

# CDM

**PROJECT NAME**

PROJECT NUMBER

Field Log Book  
Reference No. \_\_\_\_\_

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES 1						NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS		
					EXTR. ORG.	VOA 606	PEST/PCB	TRACE METALS	As	Cd				Cu	Pb
5CC	MW 3-0.0	003	4-26-89	1600	2x 40ml VnA	water	X						2		
↓	↓	↓	↓	↓	1x 50ml Poly				X				1		
↓	↓	↓	↓	↓	1x 250ml Poly				X				1		
↓	↓	↓	↓	↓	1x 250ml Poly				X				1		
↓	↓	↓	↓	↓	1x 250ml Poly				X				1		

**SAMPLED BY (SIGN)**

RELINQUISHED BY (SIGN)

① Bhane  
DATE/TIME (4.26.89/1800)

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME (        /        )

RELINQUISHED BY (SIGN)

DATE/TIME ( / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_  
DATE/TIME ( ) /

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_  
DATE/TIME (        /        )

RECEIVED BY (SIGN) \_\_\_\_\_

① \_\_\_\_\_  
DATE/TIME (4. 2. 19 6:27)

RECEIVED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME (        /        )

RECEIVED BY (SIGN)

③ \_\_\_\_\_  
DATE/TIME ( / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_  
DATE/TIME ( / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_  
DATE/TIME (        /        /        )

**METHOD OF SHIPMENT**

SHIPPED BY (SIGN)

RECEIVED FOR LABORATORY BY (SIGN)

DATE/TIME

# CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

CDM

PROJECT NAME

SCC

PROJECT NUMBER

2279-III-GW-SAMP

Field Log Book

Reference No.

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES										NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
					EXTRA ORG.	VOA 601	PEST/PCB	TRACE METALS	CO, Cr, Cu	Cr+6	NO3-						
SCC- MW 3-0.0	4-26-89	1500	2x40ml VOA	water	X										2		
↓	↓	↓	500ml Poly	↓				X							1		
↓	↓	↓	250ml Poly	↓				X							1		
↓	↓	↓	↓	↓					X						1		
SCC MW 5-0.0	4-26-89	1000	2x40ml VOA	water	X										2		
↓	↓	↓	500ml Poly	↓				X							1		
↓	↓	↓	250ml Poly	↓				X							1		
↓	↓	↓	↓	↓					X						1		
SCC EB 4-0.0	4-26-89	1045	2x40ml VOA	water	X										2		
↓	↓	↓	500ml Poly	↓				X							1		
↓	↓	↓	250ml	↓				X							1		
↓	↓	↓	250ml	↓					X						1		
↓	↓	↓	250ml	↓						X					1		
SCC BG 08-0.0	4/26/89	8:00	2x 40 ml VOA	water	X												

SAMPLED BY (SIGN)

*[Signature]* J/R Menger

RELINQUISHED BY (SIGN)

① *[Signature]*  
DATE/TIME (4/26/89 11:00)

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

\_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

① \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

② \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

METHOD OF SHIPMENT

Personal Delivery

SHIPPED BY (SIGN)

RECEIVED FOR LABORATORY BY (SIGN)

*[Signature]*

DATE/TIME

4/26 6:20 PM

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

# CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

Pg 182 **CDM**

PROJECT NAME So Cal Chem

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book  
Reference No. 1

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES										NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
					EXTR. ORG.	VOA	PEST. / PCB	TRACE METALS	Ca	Cr	Cu	Cl	NO <sub>3</sub>	Cr VI			
SCC	MW08-0.0	002	4-27-89	1600	40ml VOA	liquid	X								2		
↓	↓	↓	↓	↓	500ml Poly			X							1		
↓	↓	↓	↓	↓	250ml Poly				X						1		
↓	↓	↓	↓	↓	↓					X					1		
SCC	MW04-0.0	002	4-27-89	1330	40ml VOA		X								2		
↓	↓	↓	↓	↓	500 ml Poly			X							1		
↓	↓	↓	↓	↓	250 ml Poly				X						1		
↓	↓	↓	↓	↓	↓					X					1		
SCC	SC02-0.0	001	4-27-89	0730	40ml VOA		X								2		
↓	↓	↓	↓	↓	500 ml Poly			X							1	filter	Lab filter 0.45µ
↓	↓	↓	↓	↓	250 ml Poly						X				1	filter	↓
↓	↓	↓	↓	↓	↓				X						1		
SCC	BG08-0.0	001	4-27-89	0830	40ml VOA		X								2		
↓	↓	↓	↓	↓	↓												

SAMPLED BY (SIGN)

[Signature], HR Monger

RELINQUISHED BY (SIGN)

① HR Monger  
DATE/TIME ( 4-27-89 / 17:20 )

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

\_\_\_\_\_ DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_ DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_ DATE/TIME ( / / )

RECEIVED BY (SIGN)

① \_\_\_\_\_ DATE/TIME ( / / )

RECEIVED BY (SIGN)

② \_\_\_\_\_ DATE/TIME ( / / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_ DATE/TIME ( / / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_ DATE/TIME ( / / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_ DATE/TIME ( / / )

METHOD OF SHIPMENT

Personal Delivery

SHIPPED BY (SIGN)

RECEIVED FOR LABORATORY BY (SIGN)

[Signature]

DATE/TIME

4/27/89, 6PM

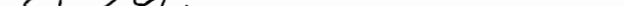
LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

## SoCal Chem

PROJECT NUMBER 2279-111-GW-SAMP.

Field Log Book  
Reference No. \_\_\_\_\_

# CDM

SAMPLED BY (SIGN)  J.R. Menger

① L/R Monger  
DATE/TIME (4/27/89 / 17:06)

② \_\_\_\_\_  
DATE/TIME (       /       )

DATE/TIME ( / )

④ \_\_\_\_\_  
DATE/TIME (        /        )

⑤ \_\_\_\_\_  
DATE/TIME (        /        )

① \_\_\_\_\_  
DATE/TIME (        /        )

② \_\_\_\_\_  
DATE/TIME (        /        )

③ \_\_\_\_\_  
DATE/TIME (       /       )

④ \_\_\_\_\_  
DATE/TIME (        /        )

⑤ \_\_\_\_\_  
DATE/TIME ( / / )

Personal Delivery

---

*[Signature]*

(4/24/89, 4pm)

**LEGEND: Original: Return to Sample Traffic Control Center      Copies: Ship with Samples**



SOUTHERN CALIFORNIA CHEMICAL LABORATORY, INC.

SOUTHERN CALIFORNIA DIVISION  
7440 Lincoln Way • Garden Grove, CA 92641  
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- ORANGE COUNTY
- VENTURA
- SANTA MARIA
- BAKERSFIELD
- L.A. COUNTY
- MOBILE LAB

7,152

CHAIN OF CUSTODY RECORD

Date 4/28/89 Page 1 of 3CLIENT Camp Dresser & McKee Inc.ADDRESS 188851 Von Karman Suite 650  
Munich, CA 92715PROJECT MANAGER Jody Edwards / CDMPHONE NUMBER (714) 752-5452PROJECT NAME SOUTHERN CAL. CHEMICALSAMPLERS: (Signature) JR Monger / [Signature]

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE		SOLID	NO. OF CNTNRS	TESTS REQUIRED	
				WATER					AIR
				Comp.	Grab.				
SCC	MW09-0.0-002	4/28/89	10:20				2	(2) 40mL UOA VIALS (-601/602)-	
SCC	MW09-0.0-002	↓	↓				1	(1) 500 mL POLY (Cd, Cr, Cu, Zn)-	
SCC	MW09-0.0-002	↓	↓				1	(1) 250 mL POLY (NO <sub>3</sub> )-	
SCC	MW09-0.0-002	↓	↓				1	(1) 250 mL POLY (Cr+6)-	
SCC	MW09-0.0-002	↓	↓				1	(1) 250 POLY (Cl)-	
SCC	BG10-0.0-001	4/28/89	08:00				2	(2) 40 mL UOA VIALS (-601/602)-	
				JRM					

Relinquished by: (Signature)

JR Monger 4-28-89

Received by: (Signature)

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

Date/Time

4/28 | 6:00 pm

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis:  
(Signature)

Date/Time

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

4/28 | 6:00 pm

Method of Shipment:

Personal Delivery

I hereby authorize the performance of the above indicated work.

Special Instructions:

24 hr Holding time on Cr VI[Signature]



EMIA RES CH L RATS, IA

SOUTHERN CALIFORNIA DIVISION  
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- L.A. COUNTY
- MOBILE LAB

CHAIN OF CUSTODY RECORD

Date 4/28/89 Page 2 of 3

CLIENT Camp Dresser & McKee Inc.

ADDRESS 188851 Von Karman Suite 650

Irving, CA 92715

PROJECT MANAGER Jody Edwards

PHONE NUMBER (714) 752-5452

PROJECT NAME Southern Cal. Chemical

SAMPLERS: (Signature) JR Monger

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC	MW11- 0.0 - 002	4/28/89	12:30					2	(2) 40 mL VIALS (601/602)
SCC	MW11- 0.0 - 002	4/28/89	12:30					1	(1) 500 mL POLY (Cd, Cr, Cu, Zn)
SCC	MW11- 0.0 - 002	4/28/89	12:30					1	(1) 250 mL POLY (NO <sub>3</sub> )
SCC	MW11- 0.0 - 002	4/28/89	12:30					1	(1) 250 mL POLY (Cr + 6)
SCC	MW11- 0.0 - 002	4/28/89	12:30					1	(1) 250 mL POLY (Cl)
			STRM						

Relinquished by: (Signature)

JR Monger 4-28-89

Relinquished by: (Signature)

Received by: (Signature)

Received by: (Signature)

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis:  
(Signature)

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

Method of Shipment:

Personal Delivery

Special Instructions:

24 hr Holding time on Cr-VI

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

1. Client retrieved \_\_\_\_\_ by \_\_\_\_\_
2. Lab Disposal \_\_\_\_\_ by \_\_\_\_\_
3. Store for \_\_\_\_\_ days. by \_\_\_\_\_
4. Other \_\_\_\_\_ by \_\_\_\_\_

Date/Time

4-28 6:00 pm

Date/Time

Date/Time

Date/Time

4/28 6:00 pm

I hereby authorize the performance of the above indicated work.

B. Brown



CHEMICAL RESOURCES, INC.

SOUTHERN CALIFORNIA DIVISION

7440 Lincoln Way • Garden Grove, CA 92641  
(714)898-6370 • FAX: (714)891-5917 • (800)LAB-1CRL

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- MOBILE LAB

7/18/89

CLINICAL CHEMISTRY LABORATORY

Date 7/28/89 Page 3 of 3

CLIENT Camp Dresser & McKee Inc.ADDRESS 188851 Von Karman Suite 650Stuine, CA 92715PROJECT MANAGER Jody EdwardsPHONE NUMBER (714) 752-5452PROJECT NAME Southern Cal. ChemicalSAMPLERS: (Signature) GR Monger

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC	MW66-0.0-002	4/28/89	15:00					2	(2) 40 mL UOA'S VIALS (601/602)
SCC	MW66-0.0-002	↓	↓					1	(1) 500 mL POLY (Cd, Cr, Cu, Zn)
SCC	MW66-0.0-002	↓	↓					1	(1) 250 mL POLY (NO <sub>3</sub> )
SCC	MW66-0.0-002	↓	↓					1	(1) 250 mL POLY (Cr <sup>+6</sup> )
SCC	MW66-0.0-002	↓	↓					1	(1) 250 mL POLY (Cl)
				<del>  </del>					

Relinquished by: (Signature)

GR Monger 7-28-89

Received by: (Signature)

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

Date/Time

4-28-89 6:00 pm

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis: (Signature)

Date/Time

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

4/28 6:00 pm

Method of Shipment:

Personal Delivery

I hereby authorize the performance of the above indicated work.

Special Instructions:

24 hr Holding time on Cr VIGR Monger



EMI RES CH RAT ES, A

SOUTHERN CALIFORNIA DIVISION  
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- ORANGE COUNTY
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- BAKERSFIELD
- L.A. COUNTY
- MOBILE LAB

CHAIN OF CUSTODY RECORD

Date 5-1-89 Page 1 of 3

912201

CLIENT Camp Dresser & McKee Inc.  
ADDRESS 188851 Von Karman Suite 650  
Orange, CA 92715

PROJECT MANAGER

Gerald Edwards

PHONE NUMBER

714-752-5452PROJECT NAME Southern Cal Chemical

SAMPLERS: (Signature)

HR Monger / B. Brown

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME hrs	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC -	MW07-0.0-002	5-1-89	10:30					2	601/602 40 mL UGA
↓	↓	↓	↓					1	500 mL POLY
								1	Cd, Cr, Cu, Zn 250 mL POLY
								1	Cr +6 250 mL POLY
								1	NO3 250 mL POLY
↓	↓	↓	↓					1	Cl 250 mL POLY
SCC -	BG11-0.0-001	5-1-89	8:00					2	601/602 40 mL POLY UGA
SCC -	DIW2-0.0-001	5-1-89	8:30					2	601/602 40 mL POLY UGA

Relinquished by: (Signature)

B. Brown

Received by: (Signature)

[Signature]

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

Date/Time

5/2/89 9:10 AM

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

[Signature]

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis:  
(Signature)

Date/Time

[Signature]

Dispatched by: (Signature)

Date/Time

Received for Laboratory by

[Signature]

Date/Time

5/2/89 9:10 AM

Method of Shipment:

Personal Delivery

I hereby authorize the performance of the above indicated work.

Special Instructions:

Do Cr+6 Analysis on the day of Receiving the Samples

SOURCE: Adapted from U.S. EPA, 1985

CCR-100

DISTRIBUTION: White with report, Yellow to CRL, Pink to Courier, Gold to Sample Control



EMIL... RES... CH... RAN... ES, A...

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(714)898-6370 • FAX: (714)891-5917 • (800)LAB-1CRL

ORANGE COUNTY  
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• SANTA MARIA  
• BAKERSFIELD  
• L.A. COUNTY  
• MOBILE LAB

CHAMIN C. CUS... DY... L... CORL

Date 5-1-89 Page 2 of 3

912201

CLIENT Camp Dresser & McKee Inc.  
ADDRESS 1888 1/2 Von Karman Suite 650  
Irvine, CA 92715

PROJECT MANAGER

Gerald Edwards

PHONE NUMBER

(714) 752-5452

PROJECT NAME Southern Cal. Chemical

SAMPLERS: (Signature)

JR Monger / B. Brown

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME hrs	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC -	EB05-0.0-001	5-1-89	09:00					2 <sup>x</sup>	601/602 70 mL VOA'S
↓	↓	↓	↓					1 <sup>x</sup>	500 mL POLY
↓	↓	↓	↓					1 <sup>x</sup>	Cd, Cu, Cr, Zn
↓	↓	↓	↓					1 <sup>x</sup>	250 mL POLY
↓	↓	↓	↓					1 <sup>x</sup>	Cr +6
↓	↓	↓	↓					1 <sup>x</sup>	250 mL POLY
↓	↓	↓	↓					1 <sup>x</sup>	Cl
↓	↓	↓	↓					1 <sup>x</sup>	250 mL POLY
↓	↓	↓	↓					1 <sup>x</sup>	No3
SCC -	PP03-0.0-001	5-1-89	14:30					2 <sup>x</sup>	601/602 70 mL VOA'S
↓	↓	↓	↓					1 <sup>x</sup>	500 mL POLY
↓	↓	↓	↓					1 <sup>x</sup>	Cd, Cr, Cu, Zn

Relinquished by: (Signature)

B. Brown

Received by: (Signature)

[Signature]

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

1. Client retrieved \_\_\_\_\_ by \_\_\_\_\_
2. Lab Disposal \_\_\_\_\_ by \_\_\_\_\_
3. Store for \_\_\_\_\_ days. by \_\_\_\_\_
4. Other \_\_\_\_\_ by \_\_\_\_\_

Relinquished by: (Signature)

[Signature]

Received by: (Signature)

[Signature]

Relinquished by: (Signature)

[Signature]

Received by Mobile Laboratory for field analysis: (Signature)

[Signature]

Dispatched by: (Signature)

[Signature]

Date/Time

Received for Laboratory by

[Signature]

Date/Time

5/2/89 9:10 AM

Date/Time

Date/Time

Date/Time

5/2/89 9:10 AM

Method of Shipment:

Personal Delivery

I hereby authorize the performance of the above indicated work.

Special Instructions:

Do Cr<sup>6</sup> Analysis on the day of Receiving the Samples



EMR RES CH TRATES,  
SOUTHERN CALIFORNIA DIVISION  
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ORANGE COUNTY  
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• BAKERSFIELD  
• L.A. COUNTY  
• MOBILE LAB

ORANGE COUNTY CUSTODY RECORD

Date 5-1-89 Page 3 of 3

912201

CLIENT Camp Dresser & McKee Inc.  
ADDRESS 188851 Von Karman Suite 650  
Murine, CA 92715

PROJECT MANAGER

Gerald Edwards

PHONE NUMBER

(714) 752-5452

PROJECT NAME

Southern Cal. Chemical

SAMPLERS: (Signature)

HR Monger / B. Stone

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME <sup>hrs</sup>	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC -	PP03 - 0.0- 001	5-1-89	14:30					1 X	Cr+6 250 mL POLY
SCC -	MW04A - 0.0- 002	5-1-89	17:00 <sup>50</sup>					2 X	601/602 40 mL VOA'S
↓	↓	↓	17:50					1 X	500 mL POLY
↓	↓	↓	↓					1 X	Cd, Cr, Cu, Zn
↓	↓	↓	↓					1 X	Cr+6 250 POLY mL
↓	↓	↓	↓					1 X	Cl 250 POLY mL
↓	↓	↓	↓					1 X	No3 250 mL POLY
BZ									

Relinquished by: (Signature)

B. Stone

Received by: (Signature)

[Signature]

Relinquished by: (Signature)

Received by: (Signature)

[Signature]

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis:  
(Signature)

[Signature]

Dispatched by: (Signature)

Date/Time

[Signature]

Received for Laboratory by:

[Signature]

Method of Shipment:

Personal Delivery

Special Instructions:

Do Cr+6 Analysis on the day of Receiving the Samples

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

1. Client retrieved \_\_\_\_\_ by \_\_\_\_\_
2. Lab Disposal \_\_\_\_\_ by \_\_\_\_\_
3. Store for \_\_\_\_\_ days. by \_\_\_\_\_
4. Other \_\_\_\_\_ by \_\_\_\_\_

Date/Time

5/2/89 9:10 AM

Date/Time

[Signature]

Date/Time

[Signature]

Date/Time

5/2/89 9:10 AM

I hereby authorize the performance of the above indicated work.



# SOUTHERN CALIFORNIA CHEMICAL RESEARCH LABORATORIES, INC.

SOUTHERN CALIFORNIA DIVISION  
7440 Lincoln Way • Garden Grove, CA 92641  
(714)898-6370 • FAX: (714)891-5917 • (800)LAB-1CRL

- ORANGE COUNTY
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- L.A. COUNTY
- MOBILE LAB

CHAIN OF CUSTODY RECORD

Date 5-1-89 Page 1 of 2

CLIENT Camp Dresser & McKee Inc.  
ADDRESS 18851 Von Karman Suite 650  
Irvine, CA 92715

PROJECT MANAGER Herald Edwards  
PHONE NUMBER (714)752-5452

PROJECT NAME Southern Cal. Chemical

SAMPLERS: (Signature) [Signature]

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE		SOLID	NO. OF CNTNRS	TESTS REQUIRED	
				WATER					AIR
				Comp.	Grab.				
SCC--	MW07-0.0-003	5-1-89 <del>11:00</del>	11:00				2	601/602 78 mL VOA	
↓	↓	↓	↓				1	500 mL VOA 601/602 POLY	
							1	Cd, Cr, Cu, Zn 250 mL POLY	
							1	Cr +6 250 mL POLY	
							1	Cl 250 mL POLY	
							1	No3 250 mL POLY	
SCC--	PP02-0.0-001	5-1-89	14:00				2	601/602 10 mL VOA'S	
↓	↓	↓	↓				1	500 mL POLY	
								Cd, Cr, Cu, Zn	

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample. 1. Client retrieved _____ by _____ 2. Lab Disposal _____ by _____ 3. Store for _____ days. by _____ 4. Other _____ by _____	Date/Time <u>5/1/89 10:05</u>
Relinquished by: (Signature)	Received by: (Signature)		Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)		Date/Time
Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time

Method of Shipment: Personal Delivery

Special Instructions: Analyze CrVI on the day of receiving the samples

I hereby authorize the performance of the above indicated work.



...EMIS... RES... CH... RAT... S, ...

SOUTHERN CALIFORNIA DIVISION  
7440 Lincoln Way • Garden Grove, CA 92641  
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- SANTA MARIA
- BAKERSFIELD
- L.A. COUNTY
- MOBILE LAB

CHAIN OF CUSTODY RECORD

Date 5-1-89 Page 2 of 2CLIENT Camp Dresser & McKee Inc.ADDRESS 188851 Van Karman Suite 650  
Yuine, CA 92715

PROJECT MANAGER

Herald Edwards

PHONE NUMBER

(714) 752-5452

PROJECT NAME

Southern Cal. Chemical

SAMPLERS: (Signature)

SR Monger / B. Brown

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
SCC -	PP02- 0.0- 001	5-1-89	14:00					1	Cr+6

256 mL P&amp;C

Relinquished by: (Signature)

Received by: (Signature)

CRL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal of sample is charged at \$10 per sample. Please indicate the disposition of your sample.

Date/Time

05/01/89 14:05

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis:  
(Signature)

Date/Time

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

Method of Shipment:

Personal Delivery

I hereby authorize the performance of the above indicated work.

Special Instructions:

Analyze CrVI on the day of receiving the samples

SOURCE: Adapted from U.S. EPA, 1985

CCR-100

DISTRIBUTION: White with report, Yellow to CRL, Pink to Courier, Gold to Sample Control

# CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

CDM

PROJECT NAME

So. Cal. Chem

PROJECT NUMBER

2279-111-86W-SAMP

Field Log Book  
Reference No. 1

SAMPLE NUMBER	DATE	TIME hrs	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES										NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
					EXTR. ORG.	VOA/SG/MS	PEST/POB	TRACE METALS	LC/GC/MS	IC/MS	IC/MS	IC/MS	IC/MS	IC/MS			
SLC	MWII-0.0	003	4-28-89	1300	40ml VOA	Water	X								2		
↓	↓	↓	↓	↓	500ml poly			X							1		
↓	↓	↓	↓	↓	250ml poly			X							1		
↓	↓	↓	↓	↓				X							1		
↓	↓	↓	↓	↓				X							1		

SAMPLED BY (SIGN)

[Signature] MR Menger

RELINQUISHED BY (SIGN)

① [Signature]  
DATE/TIME (4/28/89 1740)

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

\_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RELINQUISHED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

① [Signature]  
DATE/TIME (4/28/89 16:00)

RECEIVED BY (SIGN)

② \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

④ \_\_\_\_\_   
DATE/TIME ( / / )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_   
DATE/TIME ( / / )

METHOD OF SHIPMENT

Personal Delivery

SHIPPED BY (SIGN)

[Signature]

RECEIVED FOR LABORATORY BY (SIGN)

\_\_\_\_\_

DATE/TIME

( / / )

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

Field Log Book  
Reference No. \_\_\_\_\_[illegible]

**SAMPLED BY (SIGN)**

RELINQUISHED BY (SIGN)

① Shane  
DATE/TIME (4.7.1990)

RECEIVED BY (SIGN)

① DATE/TIME 10/27/14

RELINQUISHED BY (SIGN)

② \_\_\_\_\_  
DATE/TIME (        /        )

RECEIVED BY (SIGN)

② DATE/TIME ( / )

RELINQUISHED BY (SIGN)

DATE/TIME ( / )

RECEIVED BY (SIGN)

③ \_\_\_\_\_  
DATE/TIME (      /      )

RELINQUISHED BY (SIGN)

4 DATE/TIME ( ) / ( )

RECEIVED BY (SIGN)

④ \_\_\_\_\_  
DATE/TIME ( \_\_\_\_\_ / \_\_\_\_\_ )

RELINQUISHED BY (SIGN)

⑤ DATE/TIME ( )

RECEIVED BY (SIGN)

⑤ \_\_\_\_\_  
DATE/TIME: (\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_) (\_\_\_\_:\_\_\_\_)

**METHOD OF SHIPMENT**

SHIPPED BY (SIGN)

RECEIVED FOR LABORATORY BY (SIGN) \_\_\_\_\_

DATE/TIME